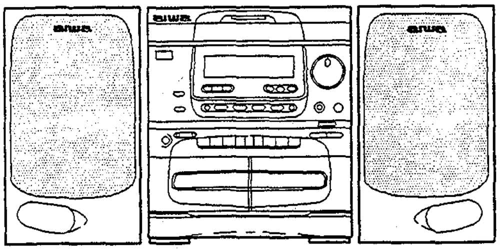
aiwa

XG - 500
NSX - 500
CX - 3500



COMPACT DISC STEREO SYSTEM

- BASIC TAPE MECHANISM : 2ZM - 3
- BASIC CD MECHANISM : KSM - 2101ABM
- TYPE. D,HE,LH,HD,HR,U,E,K,Z

製品コード : 82NY5 - 0110 (B)
82NY5 - 0210 (BJ)

SYSTEM	CD - CASSEIVER	REMOTE CONTROLLER	SPEAKER
XG - 500	CX - N500	RC - TN500	SX - N500
NSX - 500			
————	CX - N3500		
————	CX - N500		

1OOF5

S/M Code No. 0221 DATE OF ISSUE 4/1993 - K

SERVICE MANUAL

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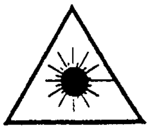
PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- ■ Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- ■ Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion.
  Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

CLASS 1
LASER PRODUCT

LUOKAN 1
LASERLAITE

KLASS 1
LASER APPARAT

Precaution to replace Optical block
光学ブロック（KSS－210A）交換時の注意

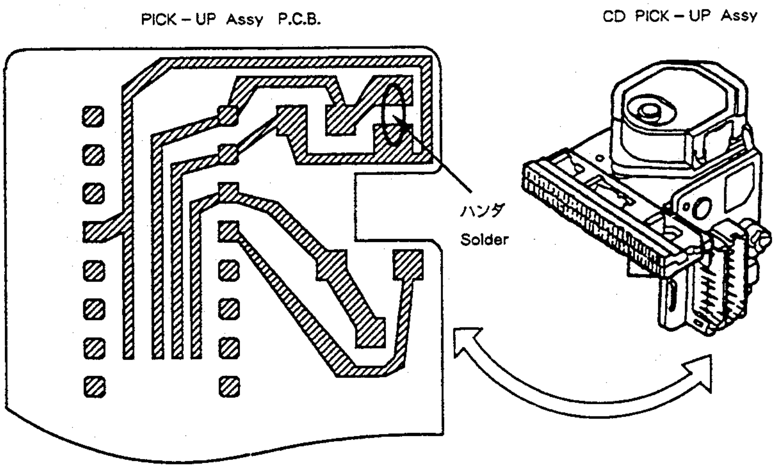
(KSS－210A)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.

光学系ブロック内のレーザーダイオードは、衣服や人体に帯電した静電荷等で電位差を生じることにより、静電破壊することがあります。人体アース、作業台のアースをとり、衣服が触れぬよう注意して下さい。

1) コネクターを接続後、右図に示すハンダ付けを取り除いて下さい。



SPECIFICATIONS

チューナー部

<FM部>

受信周波数: 76 MHz～108 MHz
実用感度: 1.8μV (75Ω) 16.2 dBf (IHF)
実効選択度: 50 dB (±400 kHz)
SN比: 70 dB (STEREO) 78 dB (MONO)
高調波歪率: MONO 0.3% (1kHz)
STEREO 0.8% (1kHz)
周波数特性: 20 Hz～15,000 Hz (+0.5 dB、−3 dB)
ｽﾃﾚｵｾﾊﾟﾚｰｼｮﾝ: 35 dB (1kHz)
アンテナ: 75Ω (不平衡)

<AM部>

受信周波数: 530 kHz～1710 kHz
実用感度: ループアンテナ300μV/m
選択度: 18 dB
SN比: 53 dB(100 dB入力) (MONO)
ｽﾃﾚｵｾﾊﾟﾚｰｼｮﾝ: 20 dB (1kHz)
アンテナ: ループアンテナ

<タイマー部>

プログラムタイマー: オン・タイマー、任意に設定可
スリープタイマー: 10分単位で設定可、最大240分

アンプ部

定格出力: 30W + 30 W (1kHz、10%) EIAJ
高調波歪率: 0.05% (15W、1kHz、6Ω)
入力感度：VIDEO/AUX：150 mV (ボリュームつき)

カセットデッキ部

トラック方式: 4トラック2チャンネル
周波数特性:

テープの種類	周波数特性
CrO_2 テープ	50～16,000 Hz
ノーマルテープ	50～15,000 Hz

SN比: 60 dB (DOLBY NR ON、CrO_2 テープピークレベル)
テープ速度: 4.8 cm / sec
モーター: DCサーボモーター×1 (キャプスタン用)
ヘッド: 再生ヘッド×1 (デッキ1)
録再・消去コンビネーションヘッド×1 (デッキ2)

CDプレーヤー部

ディスク: コンパクトディスク
読み取り方式: 非接触光学式読み取り (半導体レーザー使用)
レーザー: 半導体レーザーλ=780 nm
回転数: 約500 rpm～200 rpm (CLV)
エラー訂正方式: クロスインターリーブ リード ソロモンコード
チャンネル数: 2チャンネル
復号化: 16 bit 直線
SN比: 90 dB (1kHz)
高調波歪率: 0.05 % (1kHz)
ワウフラッター: 測定限界以下

スピーカー

(SX-N500)

型式: 3ウェイバスレフタイプ
(磁気シールドタイプ：EIAJ)
インピーダンス: 6Ω
最大入力: 40 W (ミュージックパワー)
出力音圧レベル: 87 dB / W / m
使用スピーカー: ウーハー13 cm コーン型
ツイーター5 cm コーン型
スーパーツィーター2 cm
寸法: 180 (W) ×302.5 (H) × 220 (D) mm
重量: 2.8 kg

共通部

電源: AC 100 V、50 / 60 Hz
消費電力: 70W
本体寸法: 260 (W) × 302.5 (H) × 335.5 (D) mm
本体重量: 7.0kg
システム寸法: 620 (W) × 302.5 (H) × 335.5 (D) mm
システム重量: 12.6 kg

- 外観及び仕様は予告なく変更する場合があります。
- ドルビーノイズリダクションはドルビーラボラトリーズライセンシングコーポレーションからの実施権に基づき製造されています。
  ドルビー、DOLBY及びダブルD記号ᗡᗞはドルビーラボラトリーズライセンシングコーポレーションの商標です。
- BBEおよびBBEシンボルマークはBBE・サウンド・インコーポレイテッドの商標です。
  BBE・サウンド・インコーポレイテッドにより実施権を許諾された商品です。

SPECIFICATIONS

<FM section>

Frequency range	HD: 76.0 MHz to 108 MHz LH, HE, HR, E, K, Z: 87.5 MHz to 108 MHz
Usable sensitivity (IHF)	LH, HE, HR, E, K: 1.3 µV (75 ohms) 13.2 dBf Z: 1.9 µV (75 ohms) 16.8 dBf HD: 1.8 µV (75 ohms) 16.2 dBf
Alternate channel selectivity	50 dB (±400 kHz)
Signal-to-noise ratio	STEREO: 70 dB (LH, HE, HR, HD, E, K) 65 dB (Z) MONO: 76 dB (LH, HE, HR, E, K) 78 dB (HD) 73 dB (Z)
Harmonic distortion	0.3 % (MONO), 1 kHz 0.5 % (STEREO, L-R), 1 kHz (LH, HE, HR, E, K, Z) 0.8 % (STEREO L-R), 1 kHz (HD)
Frequency response	30 Hz to 15 kHz (+0.5 dB, – 3 dB)
Stereo separation	LH, HE, HR, E, K: 33 dB at 1 kHz Z: 30 dB at 1 kHz HD: 35 dB at 1 kHz
Antenna	75 ohms (unbalanced)

<AM (MW) section>

Frequency range	NSX-500HE, HR, HD, E, K, Z: AM 531 (530) kHz to 1,602 (1,710) kHz NSX-500LH, NSX-3500U: AM 530 (531) kHz to 1,710 (1,602) kHz
Usable sensitivity	350 µV/m
Selectivity	22 dB (9 kHz)
Signal-to-noise ratio	53 dB (100 dB input)
Stereo separation (HD)	20 dB at 1 kHz
Antenna	Loop antenna

<LW section > (E, K, Z models only)

Frequency range	144 kHz to 290 kHz
Sensitivity	1,400 µV/m
Antenna	Loop antenna

<Timer section>

Program timer	On-timer, capable of free setting
Sleep timer	Capable of setting in 10-minute increments, 240 minutes maximum

<Amplifier section>

Power output	NSX-500LH, HE, HR, HD: 40 W + 40 W (6 ohms, T.H.D. 10% 1 kHz) NSX-500E, Z: 30 W + 30 W (6 ohms, T.H.D. 1 % 1 kHz) NSX-500K: 40 W + 40 W (6 ohms, T.H.D. 10 % 1 kHz) 30 W + 30 W (6 ohms, T.H.D. 1 % 1 kHz) FTC RULE (NSX-3500U) 30 watts per channel, Min. RMS at 6 ohms, from 65 Hz to 15 kHz, with no more than 1 % Total Harmonic Distortion
Harmonic distortion	0.05 % (15 W, 1 kHz, 6 ohms)
Input sensitivity	VIDEO/AUX: 150 mV (adjustable)

<Cassette deck section>

Track format	4 tracks, 2 channels
Frequency response	CrO$_2$ tape: 50 – 16,000 Hz Normal tape: 50 – 15,000 Hz
Signal-to-noise ratio	60 dB (DOLBY NR ON, CrO$_2$ tape peak level)
Tape speed	4.8 cm/sec. ($1^{7}/_{8}$ ips)
Recording system	AC bias
Erasure system	AC erase
Motor	DC servomotor × 1
Heads	Playback head × 1 (deck 1) Recording/playback/erasure head × 1 (deck 2)

<CD player section>

Disc	Compact disc
Scanning method	Non contact optical scanner (semiconductor laser application)
Laser	Semiconductor laser (λ = 780 nm)
Rotation speed	Approx. 500 rpm – 200 rpm (CLV)
Error correction	Cross Interleave, Reed Solomon code
No. of channels	2 channels
D-A conversion	16-bit linear
Wow/flutter	Unmeasurable
Signal-to-noise ratio	90 dB (1 kHz, 0 dB)
Harmonic distortion	0.05% (1 kHz, 0 dB)

<Speaker SX-N500/SX-N3500>

Cabinet type	3 way, bass reflex (Magnetism sealed type)
Speaker	130 mm ($5^{1}/_{8}$ in.) cone type woofer 50 mm (2 in.) cone type tweeter 20 mm ($^{13}/_{16}$ in.) ceramic type super tweeter
Impedance	6 ohms
Music power	40 W
Output sound pressure level	87 dB/W/m
Dimensions (W × H × D)	180 × 302.5 × 220 mm ($7^{1}/_{8}$ × 12 × $8^{3}/_{4}$ in.)
Weight	2.8 kg (6.2 lbs.)

<General>

Power requirements	NSX-500LH, HE, HR: AC 120 V/220 V/240 V, switchable 50/60 Hz NSX-500HD: AC 100-120 V/200-240 V, switchable 50/60 Hz NSX-3500U: AC 120 V, 50/60 Hz NSX-500E, Z: AC 230 V, 50 Hz NSX-500K: AC 240 V, 50 Hz
Power consumption	NSX-500LH, HE: 90 W NSX-500HD: 98 W NSX-3500U: 80 W NSX-500E, K, Z: 210 W
Dimensions (W × H × D)	Center unit: 260 × 302.5 × 335.5 mm ($10^{1}/_{4}$ × 12 × $13^{1}/_{4}$ in.) System: 620 × 302.5 × 335.5 mm ($24^{1}/_{2}$ × 12 × $13^{1}/_{4}$ in.)
Weight	Center unit: 7.4 kg (16.3 lbs.) System: 13.0 kg (28.6 lbs.)

- Design and specifications are subject to change without notice.

- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
  "DOLBY" and the double-D symbol ᗡD are trademarks of Dolby Laboratories Licensing Corporation.

- The word "BBE" and the "BBE" symbol are trademarks of BBE Sound, Inc.

- Under license from BBE Sound, Inc.

DISASSEMBLY INSTRUCTIONS

1. 3巻CDブロックのはずし方 (Fig-1参照)
   1) 本体の電源を入れ、▲ OPEN/CLOSEを押して、トレーをオープンさせる。
   2) パネルトレーのツメ ①3ケ所をはずす。
   3) 固定ビス3本 (Ⓐ×2、Ⓑ×1) をはずす。
   4) 7PケーブルをメインCB側ではずす。
   5) 14PケーブルをCDメインCB側ではずす。
   6) CDブロックのリヤ部を矢印方向に持ち上げて、CDブロックをはずす。

1. "CD Block" Removal (See Figure-1.)
   1) Turn on the power of the unit. Press the ▲ OPEN/CLOSE key to open the CD tray.
   2) Undo the three hooks ① from the tray panel.
   3) Remove the three fixing screws (Ⓐ×2, Ⓑ×1).
   4) Disconnect the 7-pin cable from the main CB.
   5) Disconnect the 14-pin cable from the CD main CB.
   6) Lift the back of the CD block in the direction of arrow and take out the CD block.

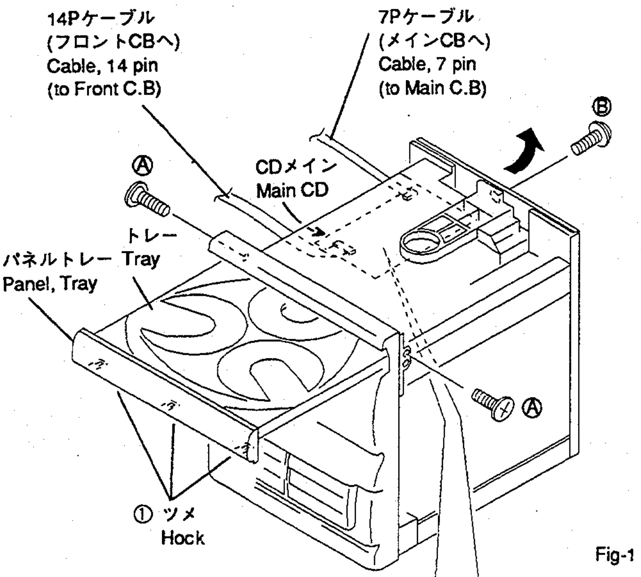

14Pケーブル
(フロントCBへ)
Cable, 14 pin
(to Front C.B)
7Pケーブル
(メインCBへ)
Cable, 7 pin
(to Main C.B)
Ⓑ
Ⓐ
CDメイン
Main CD
トレー
Tray
パネルトレー
Panel, Tray
Ⓐ
① ツメ
Hock

Fig-1

※ 注1
CDトレーを他の方法でオープンさせるには (Fig-2参照)
1) ②のギヤリレーを矢印方向に手で回して、トレーをオープンさせる。
2) CDメインCBについているローディングモーターにDC5Vを接続してモーターを回す。

※ Note 1
To open the CD tray in another way. (See Figure-2.)
1) Turn the gear relay ② by hand in the direction of arrow to open the tray.
2) Connect DC5V power to the loading motor located on the CD main CB in order to run the motor.

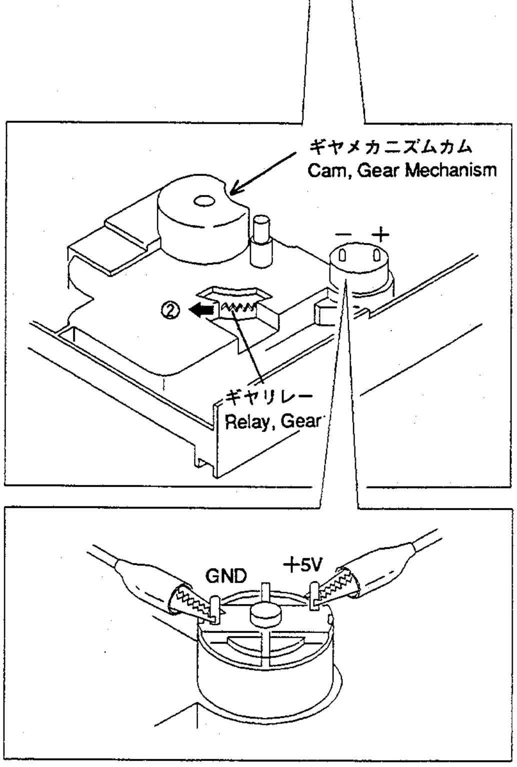

ギヤメカニズムカム
Cam, Gear Mechanism
− +
②
ギヤリレー
Relay, Gear
GND
+5V

Fig-2

2. トレーASSYのはずし方 (Fig-3参照)
   1) 本体の電源を入れるか、注1の方法でトレーをオープンさせる。
   2) トレー下側のツメ ③2ケ所をドライバーなどで押し下げて、ツメの引掛りをはずす。
   3) トレーを前方へ引き出す。

2. "Tray Assembly" Removal (See Figure-3)
   1) Turn on the power of the unit or take the procedure in Note 1 to open the tray.
   2) Press down and undo the two hooks ③, located under the tray, using a screwdriver or the like.
   3) Draw out the tray toward yourself.

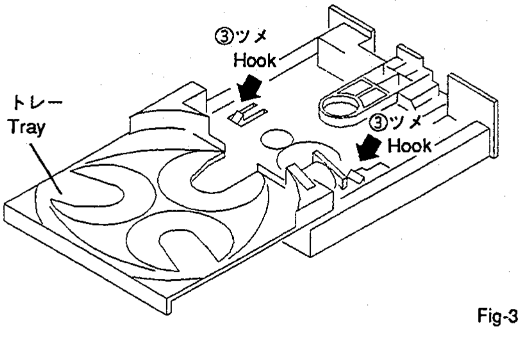

③ツメ
Hook
トレー
Tray
③ツメ
Hook

Fig-3

3. トレーと各ギヤーのセッティング方法 (Fig-4参照)

1) ギヤーメカカムと、プレートカムを図の位置のように合わせる。
2) このとき、SWをⒶの位置になるようにする。
3) ギヤートレーカムの目印 Ⓒ が図の位置にくるように取付ける。
4) ギヤートレーAの合わせマークとトレーラックの一番初めの歯を合わせながらトレーを挿し込む。

3. "Tray" and Each Gear Setting (See Figure-4)

1) Align the "Cam, Gear Mechanism" and "Cam, Plate" as shown in the figure.
2) Adjust SW so that it comes to position Ⓐ when performing.
3) Attach "Cam, Gear Tray" so that mark Ⓒ is positioned as shown in the figure.
4) Insert "Tray" so that the aligning mark of "Tray A, Gear" is opposite the first tooth of "Rack, Tray".

注)SWがⒷの位置にあった場合には、（トレーOPEN時)Ⓐの位置に合わせて、セッティングし直して下さい。
SWが正常な位置にないとトレー及び、チャッキングの誤動作を起こします。

Note) If SW is at position Ⓑ (when "Tray" is open.), reset the cams so that SW comes to position Ⓐ.
If SW is not positioned correctly, "Tray" and chucking do not work well.

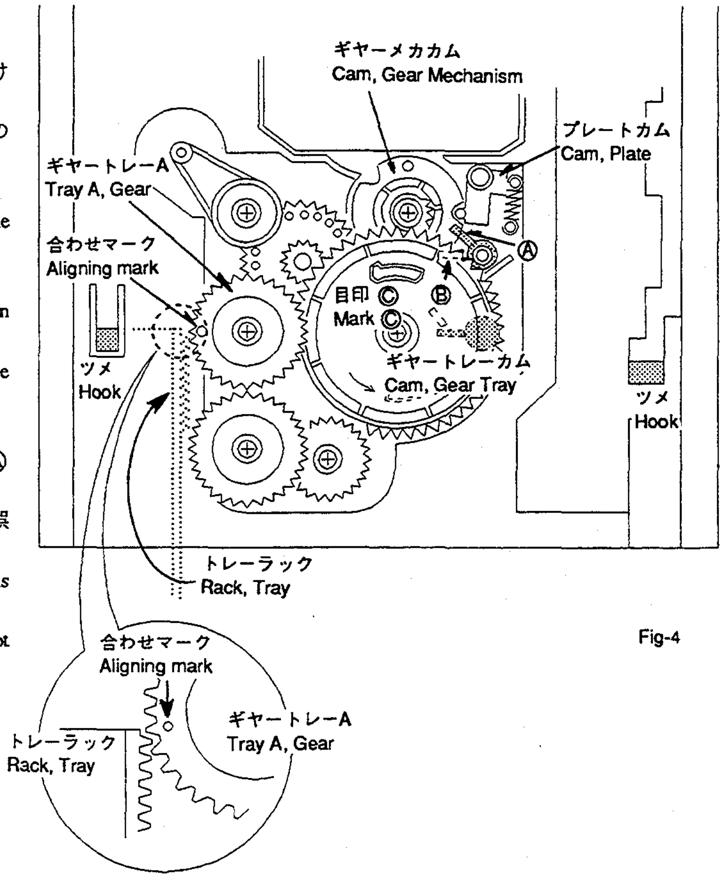

ギヤーメカカム
Cam, Gear Mechanism
プレートカム
Cam, Plate
ギヤートレーA
Tray A, Gear
合わせマーク
Aligning mark
Ⓐ
目印 Ⓒ
Mark Ⓒ
Ⓑ
ギヤートレーカム
Cam, Gear Tray
ツメ
Hook
ツメ
Hook
トレーラック
Rack, Tray
合わせマーク
Aligning mark
ギヤートレーA
Tray A, Gear
トレーラック
Rack, Tray

Fig-4

ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は “REFERENCE NAME LIST” を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
IC			
	87-002-950-010	1H	IC, BA3826S
	87-002-639-080	1H	IC, BA6296FP
	87-002-967-080	1B	IC, BU4052BF
	87-002-901-080	1B	IC, BU4094BF
	87-020-793-080	1C	IC, CXA-1081M
	87-020-794-110	1H	IC, CXA-1082BQ
	87-001-944-010	2P	IC, CXD-1167Q
	87-001-874-010	1D	IC, HA12134A
	87-001-942-010	1D	IC, LA1265G
	87-002-394-010	1B	IC, LB1641
	87-001-334-010	1B	IC, LB9051A
	87-002-607-010	1D	IC, LM7001
	87-017-311-080		IC, M65831 FP〈EXCEPT LH, K, D〉
	87-017-373-010	1D	IC, NJH32H380A
	87-020-758-010	1A	IC, NJM2068SD
	87-001-607-080	1A	IC, NJM4558M
	87-017-194-010	1E	IC, PLT104
	87-001-475-010	2M	IC, STK4132-2〈D〉
	87-020-966-010		IC, STK4142-2〈EXCEPT D〉
	87-020-446-010	1B	IC, TA7343AP
	87-002-641-010	1E	IC, TA8124P〈D, HD〉
	87-002-644-080	1E	IC, TDA1311 T
	82-NF5-634-210	2P	IC, UPD78044GF-023
	87-002-218-010		IC, XRC5451AP〈EXCEPT D〉
TRANSISTOR			
	89-502-115-080	1A	C-FET, 2SK211 GR〈K, E, Z, D, HD〉
	89-502-114-580	1A	C-FET, 2SK211Y GR〈K, E, Z, D, HD〉
	89-503-025-080	1A	C-FET, 2SK302 GR
	89-111-625-080	0E	C-TR, 2SA1162GR
	89-327-125-080	0E	C-TR, 2SC2712GR
	89-327-124-080	0E	C-TR, 2SC2712Y
	89-327-143-080	0E	C-TR, 2SC2714(O)
	89-333-266-080	0E	C-TR, 2SC3326B
	87-026-227-080	0E	C-TR, DTA114EK
	87-026-226-080	0E	C-TR, DTA143EK
	87-026-232-080	0E	C-TR, DTA144WK
	87-026-239-080	0E	C-TR, DTC114TK
	87-026-213-080	0E	C-TR, DTC114YK
	87-026-237-080	0E	C-TR, DTC124XK
	87-026-224-080	0E	C-TR, DTC143XK
	87-026-210-080	0E	C-TR, DTC144EK
	87-026-238-080	0E	C-TR, DTC144WK
	89-502-466-080	0E	FET, 2SK246BL
	89-502-464-080	0E	FET, 2SK246Y
	89-213-702-010	1A	TR, 2SB1370E
	89-113-187-880	0E	TR, 2SA1318TU
	87-026-462-080	0E	TR, 2SC1740S (RS)
	89-110-155-080	0E	TR, 2SA1015GR〈EXCEPT K, E, Z〉
	87-026-463-080	0E	TR, 2SA933S(RS)
	89-109-521-080	0E	TR, 2SA952K
	89-109-705-080	0E	TR, 2SA970GR〈EXCEPT K, E, Z〉
	89-213-292-080	1A	TR, 2SB1329, Q
	89-318-155-080	0E	TR, 2SC1815GR
	89-318-154-080	0E	TR, 2SC1815Y〈D, HD〉
	89-332-665-080	0E	TR, 2SC3266GR
	89-333-317-080	0E	TR, 2SC3331 T
	87-026-269-080	0E	TR, DTA114ES
	87-026-233-080	0E	TR, DTA114TK
	87-026-214-080	0E	TR, DTA114YS
	87-026-219-080	0E	TR, DTA144ES〈D, HD〉
	87-026-245-080	0E	TR, DTC114ES
	87-026-215-080	0E	TR, DTC114YS〈D, HD〉
DIODE			
	87-020-125-080	0E	C-DIODE, 1SS181
	87-020-027-080	0E	C-DIODE, 1SS184
	87-002-225-010	1B	DIODE, DBF 40C-K10
	87-002-836-080	0E	DIODE, 1A3-J
	87-017-377-050	0E	DIODE, 1SR35-100A〈EXCEPT K, E, Z〉
	87-020-691-080	0E	DIODE, 1SS132 T-72
	87-002-564-080	0E	DIODE, 1SS133 RA
	87-001-820-010		DIODE, GP15B(F)〈HR, K, E, Z〉
	87-027-900-010		VARI-CAP, 1SV147〈EXCEPT D, HD〉
	87-002-730-010	1A	VARI-CAP, SVC203 SPA〈D, HD〉
	87-001-914-080	0E	ZENER, UTZJ 6.2B
	87-017-122-050	0E	ZENER, HZS11A2L RA
	87-017-147-050	0E	ZENER, HZS33-2 RA
	87-017-086-050	0E	ZENER, HZS5A2 RA
	87-017-091-050	0E	ZENER, HZS5C1 RA
	87-002-640-080		ZENER, HZS5C1 RA〈EXCEPT LH, K, D〉
	87-001-290-050	0E	ZENER, HZS6B1L RA
	87-001-731-050	0E	ZENER, HZS6C2L RA
	87-001-936-050	0E	ZENER, HZS7A3L RA
	87-017-163-050	0E	ZENER, HZS9A1L RA
MAIN C.B			
TU101	81-MX4-620-010	1F	AM PACK 3, S〈EXCEPT K, E, Z〉
TU101	81-MX4-619-010		AM PACK 4〈K, E, Z〉
BPF731	82-794-697-010		FILTER ANTI BIRDIE〈Z〉
BPF831	87-030-105-010		FLTR, BPMB6A〈Z〉
C101	87-010-399-090	1C	CAP, E 3300-35 SME〈D〉
C101	87-016-055-090		CAP, E 3300-42HI-R〈EXCEPT D〉
C102	87-010-399-090	1C	CAP, E 3300-35 SME〈D〉
C102	87-016-055-090		CAP, E 3300-42HI-R〈EXCEPT D〉
C103	87-010-390-090	1B	CAP, E 3300-25 SME
C104	87-010-237-080		CAP, E 1000-16〈EXCEPT U, D, HD〉
C104	87-010-980-080	1A	CAP, E 330-16 FS〈U, D, HD〉
C105	87-010-101-080	0E	CAP, E 220-16 SME
C106	87-010-764-080	0E	CAP, E 47-63
C107	87-010-407-080		CAP, E 33-50〈U, HR〉
C107	87-010-384-080		CAP, E 100-25 SME〈K, E, Z〉
C107	87-010-385-080	0E	CAP, E 220-25〈D〉
C107	87-010-383-080		CAP, E 33-25 SME〈HE, LH〉
C107	87-010-392-080		CAP, E 33-35 SME〈HD〉
C108	87-010-408-080		CAP, E 47-50〈U, HR〉
C108	87-010-406-080		CAP, E 22-50 SME〈HD〉
C108	87-010-385-080	0E	CAP, E 220-25〈D〉
C108	87-010-260-080		CAP, E 47-25 SME〈HE, LH, K, E, Z〉
C109	87-010-263-080	0E	CAP, E 100-10
C110	87-010-263-080	0E	CAP, E 100-10
C111	87-010-370-080	0E	CAP, E 330-6.3 SME
C112	87-010-260-080	0E	CAP, E 47-25 SME〈EXCEPT HR〉
C112	87-016-130-080		CAP, E 47-25 KME〈HR〉
C113	87-010-403-080	0E	CAP, E 3.3-50 SME
C114	87-010-192-080	0E	C-CAP, S 0.022-50 F
C115	87-016-247-080	0E	C-CAP, 0.1-50F〈D〉
C116	87-012-140-080	0E	C-CAP, S 470P-50 CH
C117	87-010-405-080	0E	CAP, E 10-50 SME〈EXCEPT HR〉
C117	87-016-145-080		CAP, E 10-50 KME〈HR〉
C118	87-016-247-080	0E	C-CAP, 0.1-50F〈D〉
C119	87-015-883-080	0E	C-CAP, 0.022-25BK〈D〉
C120	87-015-883-080	0E	C-CAP, 0.022-25BK〈D〉
C205	87-016-073-080	0E	CAP, E 1-50 FX
C206	87-016-073-080	0E	CAP, E 1-50 FX
C207	87-010-401-080	0E	CAP, E 1-50 SME
C208	87-010-401-080	0E	CAP, E 1-50 SME
C209	87-010-197-080	0E	C-CAP, S 0.01-25 B
C210	87-010-197-080	0E	C-CAP, S 0.01-25 B
C211	87-010-400-080	0E	CAP, E 0.47-50 SME
C212	87-010-400-080	0E	CAP, E 0.47-50 SME
C213	87-010-402-080	0E	CAP, E 2.2-50 SME
C214	87-010-402-080	0E	CAP, E 2.2-50 SME
C215	87-010-181-080	0E	C-CAP, S 1800P-50 B
C216	87-010-181-080	0E	C-CAP, S 1800P-50 B

REF.NO	PART NO.	カンリ NO.	DESCRIPTION
C217	87-010-401-080	0E	CAP, E 1-50 SME
C218	87-010-401-080	0E	CAP, E 1-50 SME〈EXCEPT HR〉
C218	87-016-141-080		CAP, E 1-50 KME〈HR〉
C221	87-010-400-080	0E	CAP, E 0.47-50 SME
C222	87-010-400-080	0E	CAP, E 0.47-50 SME
C223	87-016-130-080		CAP, E 47-25 KME〈HR, K, E, Z〉
C223	87-010-260-080	0E	CAP, E 47-25 SME〈HE, LH, U, D, HD〉
C224	87-010-260-080	0E	CAP, E 47-25 SME
C225	87-016-130-080		CAP, E 47-25 KME〈EXCEPT D, HD〉
C225	87-010-260-080	0E	CAP, E 47-25 SME〈D, HD〉
C226	87-016-130-080		CAP, E 47-25 KME〈EXCEPT D, HD〉
C226	87-010-260-080	0E	CAP, E 47-25 SME〈D, HD〉
C227	87-012-368-080	0E	C-CAP, S 0.1-50 F
C228	87-012-368-080	0E	C-CAP, S 0.1-50 F
C229	87-012-361-080	0E	C-CAP, S 0.056-25 Y
C230	87-012-361-080	0E	C-CAP, S 0.056-25 Y
C231	87-010-178-080	0E	C-CAP, S 1000P-50 B〈D〉
C231	87-010-184-080		C-CAP, S 3300P-50 B〈Z〉
C232	87-010-178-080	0E	C-CAP, S 1000P-50 B〈D〉
C232	87-010-184-080		C-CAP, S 3300P-50 B〈Z〉
C233	87-010-546-080	0E	CAP, E 0.33-50 SME〈EXCEPT HR〉
C233	87-016-292-080		CAP, E 0.33-50 KME〈HR〉
C234	87-010-263-080	0E	CAP, E 100-10〈EXCEPT HR〉
C234	87-016-123-080		CAP, E 100-10 KME〈HR〉
C236	87-010-408-080	0E	CAP, E 47-50 SME
C237	87-010-403-080	0E	CAP, E 3.3-50 SME
C238	87-010-403-080	0E	CAP, E 3.3-50 SME
C241	87-010-197-080		C-CAP, S 0.01-25 B〈Z〉
C242	87-010-197-080		C-CAP, S 0.01-25 B〈Z〉
C243	87-010-154-080	0E	C-CAP, S 10P-50 CH
C244	87-010-154-080	0E	C-CAP, S 10P-50 CH
C245	87-010-322-080	0E	C-CAP, S 100P-50 CH
C246	87-010-322-080	0E	C-CAP, S 100P-50 CH
C253	87-010-260-080	0E	CAP, E 47-25 SME
C303	87-012-156-080	0E	C-CAP, S 220P-50 CH
C304	87-012-156-080	0E	C-CAP, S 220P-50 CH
C305	87-010-189-080	0E	C-CAP, S 8200P-50 B
C306	87-010-189-080	0E	C-CAP, S 8200P-50 B
C309	87-010-197-080	0E	C-CAP, S 0.01-25 B
C310	87-010-197-080	0E	C-CAP, S 0.01-25 B
C311	87-010-426-080	0E	C-CAP, S 0.012-25 B
C312	87-010-426-080	0E	C-CAP, S 0.012-25 B
C313	87-010-192-080	0E	C-CAP, S 0.022-50 F
C314	87-010-260-080	0E	CAP, E 47-25 SME
C351	87-012-154-080	0E	C-CAP, S 150P-50 CH
C352	87-012-154-080	0E	C-CAP, S 150P-50 CH
C353	87-012-145-080	0E	C-CAP, S 270P-50 CH
C354	87-012-145-080	0E	C-CAP, S 270P-50 CH
C355	87-010-260-080	0E	CAP, E 47-25 SME
C357	87-016-248-080	0E	C-CAP, 8200P-50 B
C358	87-010-189-080	0E	C-CAP, S 8200P-50 B
C361	87-010-197-080	0E	C-CAP, S 0.01-25 B
C362	87-010-197-080	0E	C-CAP, S 0.01-25 B
C363	87-010-213-080	0E	C-CAP, S 0.015-25 B
C364	87-010-213-080	0E	C-CAP, S 0.015-25 B
C365	87-015-883-080	0E	C-CAP, 0.022-25 B K
C366	87-010-197-080	0E	C-CAP, S 0.01-25 B
C401	87-010-402-080	0E	CAP, E 2.2-50 SME
C402	87-010-402-080	0E	CAP, E 2.2-50 SME
C405	87-010-197-080	0E	C-CAP, S 0.01-25 B
C406	87-010-197-080	0E	C-CAP, S 0.01-25 B
C407	87-010-401-080	0E	CAP, E 1-50 SME
C408	87-010-401-080	0E	CAP, E 1-50 SME
C409	87-010-182-080	0E	C-CAP, S 2200P-50 B
C410	87-010-182-080	0E	C-CAP, S 2200P-50 B
C411	87-010-188-080	0E	C-CAP, S 6800P-50 B
C412	87-010-188-080	0E	C-CAP, S 6800P-50 B
C415	87-012-154-080	0E	C-CAP, S 150P-50 CH
C416	87-012-154-080	0E	C-CAP, S 150P-50 CH
C421	87-010-177-080	0E	C-CAP, S 820P-50 SL

REF.NO	PART NO.	カンリ NO.	DESCRIPTION
C422	87-010-177-080	0E	C-CAP, S 820P-50 SL
C451	87-012-156-080	0E	C-CAP, S 220P-50 CH
C452	87-012-156-080	0E	C-CAP, S 220P-50 CH
C453	87-010-178-080	0E	C-CAP, S 1000P-50 B
C455	87-010-178-080	0E	C-CAP, S 1000P-50 B
C456	87-010-260-080	0E	CAP, E 47-25 SME
C457	87-010-197-080	0E	C-CAP, S 0.01-25 B
C458	87-010-183-080	0E	C-CAP, S 2700P-50 B
C459	87-010-183-080	0E	C-CAP, S 2700P-50 B
C460	87-010-183-080	0E	C-CAP, S 2700P-50 B
C470	87-010-196-080	0E	C-CAP, S 0.1-25 F
C501	87-010-401-080	0E	CAP, E 1-50 SME
C502	87-010-401-080	0E	CAP, E 1-50 SME
C503	87-010-179-080	0E	C-CAP, S 1200P-50 B
C504	87-010-179-080	0E	C-CAP, S 1200P-50 B
C505	87-012-142-080	0E	C-CAP, S 0.33-16 F
C506	87-012-142-080	0E	C-CAP, S 0.33-16 F
C507	87-010-178-080	0E	C-CAP, S 1000P-50 B
C508	87-010-178-080	0E	C-CAP, S 1000P-50 B
C509	87-010-371-080	0E	CAP, E 470-6.3
C515	87-010-545-080	0E	CAP, E 0.22-50 SME
C516	87-010-545-080	0E	CAP, E 0.22-50 SME
C570	87-010-193-080	0E	C-CAP, S 0.033-25 F
C571	87-010-193-080	0E	C-CAP, S 0.033-25 F
C572	87-015-947-080	0E	C-CAP, 0.018-25 B K
C581	87-010-405-080	0E	CAP, E 10-50 SME
C582	87-010-405-080	0E	CAP, E 10-50 SME
C590	87-010-196-080	0E	C-CAP, S 0.1-25 F
C592	87-010-401-080	0E	CAP, E 1-50 SME
C593	87-010-401-080	0E	CAP, E 1-50 SME
C594	87-010-401-080	0E	CAP, E 1-50 SME
C595	87-010-374-080		CAP, E 47-10〈EXCEPT D〉
C601	87-010-401-080		CAP, E 1-50 SME〈EXCEPT D〉
C602	87-010-401-080		CAP, E 1-50 SME〈EXCEPT D〉
C603	87-010-192-080		C-CAP, S 0.022-50 F〈EXCEPT D〉
C604	87-010-192-080		C-CAP, S 0.022-50 F〈EXCEPT D〉
C605	87-012-154-080		C-CAP, S 150P-50 CH〈EXCEPT D〉
C606	87-012-154-080		C-CAP, S 150P-50 CH〈EXCEPT D〉
C607	87-010-197-080		C-CAP, S 0.01-25 B〈EXCEPT D〉
C608	87-010-197-080		C-CAP, S 0.01-25 B〈EXCEPT D〉
C609	87-010-401-080		CAP, E 1-50 SME〈EXCEPT D〉
C610	87-010-401-080		CAP, E 1-50 SME〈EXCEPT D〉
C611	87-010-404-080		CAP, E 4.7-50 SME〈EXCEPT D〉
C612	87-010-404-080		CAP, E 4.7-50 SME〈EXCEPT D〉
C615	87-010-183-080		C-CAP, S 2700P-50 B〈EXCEPT D〉
C616	87-010-183-080		C-CAP, S 2700P-50 B〈EXCEPT D〉
C617	87-012-155-080		C-CAP, S 180P-50 CH〈EXCEPT D〉
C618	87-012-155-080		C-CAP, S 180P-50 CH〈EXCEPT D〉
C619	87-010-192-080		C-CAP, S 0.022-50 F〈EXCEPT D〉
C620	87-010-192-080		C-CAP, S 0.022-50 F〈EXCEPT D〉
C621	87-010-400-080		CAP, E 0.47-50 SME〈EXCEPT D〉
C622	87-010-400-080		CAP, E 0.47-50 SME〈EXCEPT D〉
C623	87-010-404-080		CAP, E 4.7-50 SME〈EXCEPT D〉
C624	87-010-404-080		CAP, E 4.7-50 SME〈EXCEPT D〉
C628	87-010-404-080	0E	CAP, E 4.7-50 SME
C630	87-010-405-080		CAP, E 10-50 SME〈EXCEPT D〉
C631	87-010-401-080		CAP, E 1-50 SME〈EXCEPT D〉
C632	87-010-401-080		CAP, E 1-50 SME〈EXCEPT D〉
C633	87-010-101-080		CAP, E 220-16 SME〈EXCEPT D〉
C635	87-010-405-080		CAP, E 10-50 SME〈EXCEPT D〉
C636	87-010-404-080	0E	CAP, E 4.7-50 SME
C641	87-010-405-080		CAP, E 10-50 SME〈EXCEPT D〉
C642	87-010-405-080		CAP, E 10-50 SME〈EXCEPT D〉
C700	87-010-221-080	0E	CAP, E 470-10
C701	87-010-384-080	0E	CAP, E 100-25 SME
C702	87-010-404-080	0E	CAP, E 4.7-50 SME
C703	87-010-197-080	0E	C-CAP, S 0.01-25 B
C705	87-010-248-080	0E	CAP, E 220-10 SME
C706	87-010-197-080	0E	C-CAP, S 0.01-25 B
C707	87-010-197-080	0E	C-CAP, S 0.01-25 B

REF.NO	PART NO.	カンリ NO.	DESCRIPTION
C708	87-010-197-080	0E	C-CAP, S 0.01-25 B
C709	87-010-313-080	0E	C-CAP, S 18P-50 CH〈D〉
C710	87-010-312-080		C-CAP, S 15P-50 CH〈EXCEPT D〉
C710	87-010-316-080	0E	C-CAP, S 33P-50 CH〈D〉
C711	87-010-213-080	0E	C-CAP, S 0.015-25 B〈EXCEPT U〉
C711	87-010-192-080		C-CAP, S 0.022-50 F〈U〉
C712	87-010-213-080	0E	C-CAP, S 0.015-25 B〈EXCEPT U〉
C712	87-010-192-080		C-CAP, S 0.022-50 F〈U〉
C713	87-010-184-080	0E	C-CAP, S 3300P-50 B
C714	87-010-184-080	0E	C-CAP, S 3300P-50 B
C715	87-010-179-080	0E	C-CAP, S 1200P-50 B
C716	87-010-179-080	0E	C-CAP, S 1200P-50 B
C719	87-010-196-080	0E	C-CAP, S 0.1-25 F
C720	87-012-154-080	0E	C-CAP, S 150P-50 CH
C721	87-010-401-080	0E	CAP, E 1-50 SME
C722	87-010-401-080	0E	CAP, E 1-50 SME
C723	87-010-405-080	0E	CAP, E 10-50 SME
C724	87-014-057-080	0E	CAP, PP 1000P-100 J
C725	87-010-401-080	0E	CAP, E 1-50 SME
C726	87-010-403-080	0E	CAP, E 3.3-50 SME
C727	87-010-248-080	0E	CAP, E 220-10 SME
C728	87-010-402-080		CAP, E 2.2-50 SME〈Z〉
C729	87-010-402-080		CAP, E 2.2-50 SME〈Z〉
C731	87-010-197-080	0E	C-CAP, S 0.01-25 B
C732	87-010-197-080	0E	C-CAP, S 0.01-25 B
C734	87-010-322-080	0E	C-CAP, S 100P-50 CH
C741	87-010-402-080	0E	CAP, E 2.2-50 SME
C742	87-012-157-080	0E	C-CAP, S 330P-50 CH
C743	87-010-382-080	0E	CAP, E 22-25 SME
C744	87-010-197-080	0E	C-CAP, S 0.01-25 B
C745	87-010-197-080	0E	C-CAP, S 0.01-25 B
C746	87-010-401-080	0E	CAP, E 1-50 SME
C747	87-010-197-080	0E	C-CAP, S 0.01-25 B
C748	87-010-404-080	0E	CAP, E 4.7-50 SME
C749	87-010-405-080	0E	CAP, E 10-50 SME
C750	87-010-544-080	0E	CAP, E 0.1-50
C751	87-010-403-080	0E	CAP, E 3.3-50 SME
C752	87-010-197-080		C-CAP, S 0.01-25 B〈EXCEPT D, HD〉
C753	87-015-632-080		C-CAP, 0.015-50 B K〈EXCEPT D, HD〉
C754	87-010-260-080		CAP, E 47-25 SME〈EXCEPT D, HD〉
C755	87-010-401-080	0E	CAP, E 1-50 SME
C756	87-010-197-080	0E	C-CAP, S 0.01-25 B
C770	87-010-402-080	0E	CAP, E 2.2-50 SME〈D, HD〉
C773	87-010-263-080	0E	CAP, E 100-10〈D, HD〉
C774	87-010-545-080	0E	CAP, E 0.22-50 SME〈D, HD〉
C775	87-010-192-080	0E	C-CAP, S 0.022-50 F〈D, HD〉
C776	87-010-404-080	0E	CAP, E 4.7-50 SME〈D, HD〉
C777	87-010-194-080	0E	C-CAP, S 0.047-25 F〈D, HD〉
C778	87-010-194-080	0E	C-CAP, S 0.047-25 F〈D, HD〉
C779	87-010-263-080	0E	CAP, E 100-10〈D, HD〉
C780	87-010-197-080	0E	C-CAP, S 0.01-25 B〈D, HD〉
C781	87-010-313-080	0E	C-CAP, S 18P-50 CH〈D, HD〉
C783	87-010-544-080	0E	CAP, E 0.1-50〈D, HD〉
C784	87-010-544-080	0E	CAP, E 0.1-50〈D, HD〉
C785	87-010-544-080	0E	CAP, E 0.1-50〈D, HD〉
C786	87-010-544-080	0E	CAP, E 0.1-50〈D, HD〉
C787	87-010-544-080	0E	CAP, E 0.1-50〈D, HD〉
C788	87-010-544-080	0E	CAP, E 0.1-50〈D, HD〉
C802	87-010-154-080		C-CAP, S 10P-50 CH〈Z〉
C802	87-010-151-080	0E	C-CAP, S 7P-50 CH〈EXCEPT Z〉
C804	87-010-151-080	0E	C-CAP, S 7P-50 CH〈EXCEPT Z〉
C805	87-010-150-080	0E	C-CAP, S 6P-50 CH
C806	87-010-145-080	0E	C-CAP, S 1P-50 CH
C806	87-010-148-080		C-CAP, S 4P-50 CH〈Z〉
C807	87-010-154-080	0E	C-CAP, S 10P-50 CH
C807	87-010-149-080		C-CAP, S 5P-50 CH〈Z〉
C808	87-010-322-080	0E	C-CAP, S 100P-50 CH
C809	87-010-197-080	0E	C-CAP, S 0.01-25 B
C810	87-010-197-080	0E	C-CAP, S 0.01-25 B
C811	87-010-149-080	0E	C-CAP, S 5P-50 CH

REF.NO	PART NO.	カンリ NO.	DESCRIPTION
C812	87-010-312-080		C-CAP, S 15P-50 CH〈EXCEPT D, HD〉
C812	87-010-146-080	0E	C-CAP, S 2P-50 CH〈D, HD〉
C813	87-010-197-080	0E	C-CAP, S 0.01-25 B
C814	87-010-197-080	0E	C-CAP, S 0.01-25 B
C818	87-010-197-080	0E	C-CAP, S 0.01-25 B
C819	87-010-197-080	0E	C-CAP, S 0.01-25 B
C820	87-010-260-080	0E	CAP, E 47-25 SME
C821	87-010-197-080	0E	C-CAP, S 0.01-25 B
C822	87-010-197-080	0E	C-CAP, S 0.01-25 B〈EXCEPT Z〉
C823	87-010-197-080	0E	C-CAP, S 0.01-25 B
C826	87-010-197-080	0E	C-CAP, S 0.01-25 B
C827	87-010-145-080		C-CAP, S 1P-50 CH〈Z〉
C830	87-010-197-080	0E	C-CAP, S 0.01-25 B
C831	87-010-148-080		C-CAP, S 4P-50 CH〈EXCEPT Z, D, HD〉
C831	87-010-150-080		C-CAP, S 6P-50 CH〈Z〉
C831	87-010-152-080	0E	C-CAP, S 8P-50 CH〈D, HD〉
C833	87-018-134-080	0E	CAP, TC-U 0.01-16〈HR, K, E, Z, D, HD〉
C835	87-010-154-080		C-CAP, S 10P-50 CH〈EXCEPT D, HD〉
C835	87-010-311-080	0E	C-CAP, S 12P-50 CH〈D, HD〉
C836	87-010-312-080		C-CAP, S 15P-50 CH〈EXCEPT D, HD〉
C836	87-010-314-080	0E	C-CAP, S 22P-50 CH〈D, HD〉
C837	87-010-312-080		C-CAP, S 15P-50 CH〈EXCEPT D, HD〉
C837	87-010-314-080	0E	C-CAP, S 22P-50 CH〈D, HD〉
C840	87-010-197-080	0E	C-CAP, S 0.01-25 B
C843	87-010-146-080	0E	C-CAP, S 2P-50 CH
C941	87-010-197-080		C-CAP, S 0.01-25 B〈K, E, Z〉
C942	87-010-311-080		C-CAP, S 12P-50 CH〈K, E, Z〉
C944	87-010-154-080		C-CAP, S 10P-50 CH〈K, E, Z〉
C944	87-010-311-080	0E	C-CAP, S 12P-50 CH〈EXCEPT K, E, Z〉
C945	87-014-050-080		CAP, PP 510P-100 J〈K, E, Z〉
C946	87-010-401-080	0E	CAP, E 1-50 SME
C949	87-010-196-080		C-CAP, S 0.1-25 F〈K, E, Z〉
C950	87-010-322-080	0E	C-CAP, S 100P-50 CH
C983	87-010-544-080	0E	CAP, E 0.1-50
C990	87-010-197-080	0E	C-CAP, S 0.01-25 B
CF741	82-794-670-010	1A	CF BFU450C4N
CF801	82-799-621-010		CF MS2-A〈Z〉
CF801	87-008-261-010	0E	FLTR, SFE10.7MA5-A〈EXCEPT Z〉
CF802	87-008-261-010		FLTR, SFE10.7MA5-A〈EXCEPT D, HD〉
CF802	87-008-261-010	0E	FLTR, SFE10.7MA5-A〈D, HD〉
CF803	87-008-261-010		FLTR, SFE10.7MA5-A〈Z〉
J250	87-049-855-010	1B	JACK, 6.3 W/S
J253	80-MT3-616-010	1A	JACK, PIN 2P〈EXCEPT Z〉
J253	80-MT3-631-010		JACK, PIN 2P EARTH〈Z〉
J254	87-033-215-010	1B	TERMINAL SP 4P R (*)
J652	80-MT3-616-010	1A	JACK, PIN 2P
J801	81-631-646-010		ANT TERM 2P PAL〈K, E, Z〉
J801	82-NF5-621-019	1B	ANT TERM JBT0222〈EXCEPT K, E, Z〉
L201	87-005-366-010		COIL, 1UH〈Z〉
L202	87-005-366-010		COIL, 1UH〈Z〉
L401	82-194-634-080	1A	COIL, 10MH〈D〉
L401	87-005-580-080		COIL, 10MHJ〈EXCEPT D〉
L402	82-194-634-080	1A	COIL, 10MH〈D〉
L402	87-005-580-080		COIL, 10MHJ〈EXCEPT D〉
L403	82-231-622-080	1A	COIL, 22MH-J〈D〉
L403	87-005-525-080		COIL, 22MH-J〈EXCEPT D〉
L404	82-231-622-080	1A	COIL, 22MH-J〈D〉
L404	87-005-525-080		COIL, 22MH-J〈EXCEPT D〉
L451	87-007-300-010	1A	COIL, OSC BIAS 85K
L701	81-631-643-010	1A	COIL 1 POLE MPX
L702	81-631-643-010	1A	COIL 1 POLE MPX
L703	87-003-050-010	0E	COIL, 47UH〈D, HD〉
L741	81-631-611-010	1A	COIL, QUAD(SINGLE)
L742	87-008-491-010		FLTR, PACFAZ 450〈EXCEPT D, HD〉
L742	81-MT3-656-010	1B	FLTR, PCFMT-039 450〈D, HD〉
L801	87-006-219-010	0E	COIL, ANT FM 3/4T, S
L802	87-006-210-010		COIL, ANT FM 2 3/4T〈EXCEPT D, HD〉
L802	87-006-218-010	0E	COIL, ANT FM 3-3/4 TS〈D, HD〉
L803	87-006-200-010	0E	COIL, FM 3-1/2T, L5
L804	87-006-217-010	0E	COIL, FM 4-1/2TS〈D, HD〉

REF.NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
L804	87-006-201-010		COIL, FM3-1/2TS, L5〈EXCEPT D, HD〉
L805	87-003-098-050	0E	COIL, 2.2UH RA
L806	87-008-427-010	1A	COIL FM IFT
L807	87-006-205-010		COIL, OSC FM (7K)〈EXCEPT D, HD〉
L807	87-006-232-010	1A	COIL, OSC FM(7K)D, 3〈D, HD〉
L831	87-006-201-010		COIL, RF FM3-1/2TS, L5〈Z〉
L832	87-003-098-050	0E	COIL, 2.2UH RA
L941	87-006-208-010		COIL, ANT LW〈K, E, Z〉
L942	87-007-305-010		COIL OSC LW S〈K, E, Z〉
R105	87-022-050-080	0E	RESIS METAL 1W-0.22J
R106	87-022-050-080	0E	RESIS METAL 1W-0.22J
R243	87-022-391-080		RES, M/F 0.47-1W J〈EXCEPT U, D〉
R243	87-022-050-080	0E	RESIS METAL 1W-0.22J〈D〉
R244	87-022-391-080		RES, M/F 0.47-1W J〈EXCEPT U, D〉
R244	87-022-050-080	0E	RESIS METAL 1W-0.22J〈D〉
R257	87-022-391-080		RES, M/F 0.47-1W J〈EXCEPT U, D〉
R258	87-022-391-080		RES, M/F 0.47-1W J〈EXCEPT U, D〉
RY101	87-045-335-010	1D	RELAY, G5Z-2A 12VDC
SFR301	87-024-168-080	0E	SFR, 1K DIA6 V
SFR302	87-024-168-080	0E	SFR, 1K DIA6 V
SFR351	87-024-168-080	0E	SFR, 1K DIA6 V
SFR352	87-024-168-080	0E	SFR, 1K DIA6 V
SFR401	87-024-171-080	0E	SFR 4.7K DIA6 V
SFR402	87-024-171-080	0E	SFR 4.7K DIA6 V
SFR451	87-024-175-080	0E	SFR, 47K DIA6 V
SFR452	87-024-175-080	0E	SFR, 47K DIA6 V
SFR721	87-024-171-080	0E	SFR 4.7K DIA6 V
SFR722	87-024-174-080	0E	SFR, 33K DIA6 V
TC701	87-011-221-080		TRIMER, 30P VCT 51〈EXCEPT D〉
TC801	87-011-219-080	1A	CAP TRIMMER 10P
TC802	87-011-219-080	1A	CAP TRIMMER 10P
TC803	87-011-219-080		CAP TRIMMER 10P VCT〈Z〉
TC942	87-011-221-080		TRIMER. 30P VCT51〈K, E, Z〉
VR651	82-NF5-660-010	1B	VR, 50KBX2 RK14K12A
W101	82-NF5-650-010	1B	F-CABEL, 7P-2.5S〈EXCEPT E〉
W101	81-MX4-706-010		F-CABLE, 7P-2.5 G〈E〉
X701	87-030-299-010	1B	VIB, XTAL 7.2MHZ(KDS)〈D〉
X701	87-030-163-010		VIB, XTAL 7.2MHZ(NDK)〈EXCEPT D〉
X702	87-030-283-010	1A	VIB, CER CSA3.60MGF N〈D, HD〉

FRONT C.B

REF.NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
C101	87-010-178-080	0E	C-CAP, S 1000P-50 B
C201	87-010-404-040	0E	CAP, E 4.7-50 SME
C202	87-010-404-040	0E	CAP, E 4.7-50 SME
C203	87-010-408-040	0E	CAP, E 47-50 SME
C204	87-010-401-040	0E	CAP, E 1-50 SME
C205	87-010-263-040	0E	CAP, E 100-10
C206	87-010-248-040	0E	CAP, E 220-10 SME
C207	87-010-401-040	0E	CAP, E 1-50 SME
C208	87-010-196-080	0E	C-CAP, S 0.1-25 F
C210	87-010-196-080	0E	C-CAP, S 0.1-25 F
C211	87-010-178-080	0E	C-CAP, S 1000P-50 B
C212	87-010-405-040	0E	CAP, E 10-50 SME
C401	87-010-196-080	0E	C-CAP, S 0.1-25 F
C501	87-010-384-040	0E	CAP, E 100-25 SME
C601	87-010-196-080	0E	C-CAP, S 0.1-25 F
C602	87-010-196-080	0E	C-CAP, S 0.1-25 F
C603	87-010-196-080	0E	C-CAP, S 0.1-25 F
C604	87-010-179-080	0E	C-CAP, S 1200P-50 B
C605	87-010-401-040	0E	CAP, E 1-50 SME
C606	87-010-401-040	0E	CAP, E 1-50 SME
C607	87-012-157-080	0E	C-CAP, S 330P-50 CH
C608	87-010-401-040	0E	CAP, E 1-50 SME
C609	87-010-545-040	0E	CAP, E 0.22-50 SME
C610	87-010-175-080	0E	C-CAP, S 560P-50 SL
C611	87-010-248-040	0E	CAP, E 220-10 SME
C612	87-010-196-080	0E	C-CAP, S 0.1-25 F
C801	87-010-197-080	0E	C-CAP, S 0.01-25 B
C802	87-010-318-080	0E	C-CAP, S 47P-50 CH
C803	87-010-197-080	0E	C-CAP, S 0.01-25 B
C805	87-010-401-040	0E	CAP, E 1-50 SME
C806	87-010-405-040	0E	CAP, E 10-50 SME
FL101	82-NF5-632-010	2B	FL, BJ116GK
J601	81-MX4-630-010	1A	JACK, 3.5
LED401	87-017-297-080	0E	LED, SEL1550CM TP7
LED402	87-017-297-080	0E	LED, SEL1550CM TP7
LED403	87-017-297-080	0E	LED, SEL1550CM TP7
LED404	87-017-297-080	0E	LED, SEL1550CM TP7
LED405	87-017-350-080	0E	LED, SEL1550CM
LED406	87-017-350-080	0E	LED, SEL1550CM
LED407	87-017-350-080	0E	LED, SEL1550CM
LED408	87-017-350-080	0E	LED, SEL1550CM
LED409	87-017-350-080	0E	LED, SEL1550CM
LED410	87-017-350-080	0E	LED, SEL1550CM
LED411	87-017-350-080	0E	LED, SEL1550CM
LED412	87-017-350-080	0E	LED, SEL1550CM
LED413	87-017-350-080	0E	LED, SEL1550CM
LED414	87-017-350-080	0E	LED, SEL1550CM
S301	87-036-215-080	0E	SW, TACT EVQ-21404M
S302	87-036-215-080		SW, TACT EVQ-21404M〈EXCEPT D〉
S303	87-036-215-080	0E	SW, TACT EVQ-21404M
S304	87-036-215-080	0E	SW, TACT EVQ-21404M
S305	87-036-215-080	0E	SW, TACT EVQ-21404M
S306	87-036-215-080	0E	SW, TACT EVQ-21404M
S307	87-036-215-080	0E	SW, TACT EVQ-21404M
S308	87-036-215-080	0E	SW, TACT EVQ-21404M
S309	87-036-215-080	0E	SW, TACT EVQ-21404M
S310	87-036-215-080	0E	SW, TACT EVQ-21404M
S311	87-036-215-080	0E	SW, TACT EVQ-21404M
S312	87-036-215-080	0E	SW, TACT EVQ-21404M
S315	87-036-215-080	0E	SW, TACT EVQ-21404M
S316	87-036-215-080	0E	SW, TACT EVQ-21404M
S317	87-036-215-080	0E	SW, TACT EVQ-21404M
S318	87-036-215-080	0E	SW, TACT EVQ-21404M
S319	87-036-215-080	0E	SW, TACT EVQ-21404M
S320	87-036-215-080	0E	SW, TACT EVQ-21404M
S321	87-036-215-080	0E	SW, TACT EVQ-21404M
S322	87-036-215-080	0E	SW, TACT EVQ-21404M
S323	87-036-215-080	0E	SW, TACT EVQ-21404M
S324	87-036-215-080	0E	SW, TACT EVQ-21404M
S325	87-036-215-080	0E	SW, TACT EVQ-21404M
S326	87-036-215-080	0E	SW, TACT EVQ-21404M
S327	87-036-215-080	0E	SW, TACT EVQ-21404M
VR601	82-NF5-659-010		VR, 10KB STRK15〈EXCEPT LH, K, D〉
VR602	81-MX4-637-010	1B	VR 10KA RK11K1130
X201	87-008-394-080	1A	CF CST 4.19MGW

CD C.B

REF.NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
	82-NF5-651-010	1B	CABLE FFC, 14P-1.25
	82-NF5-652-010	1B	CABLE FFC, 7P-1.25
C2	87-010-146-080	0E	C-CAP, S 2P-50 CH
C3	87-010-154-080	0E	C-CAP, S 10P-50 CH
C4	87-010-263-080	0E	CAP, E 100-10
C5	87-010-178-080	0E	C-CAP, S 1000P-50 B
C6	87-010-382-080	0E	CAP, E 22-25 SME
C7	87-010-197-080	0E	C-CAP, S 0.01-25 B
C8	87-010-248-080	0E	CAP, E 220-10 SME
C9	87-010-193-080	0E	C-CAP, S 0.033-25 F
C10	87-010-188-080	0E	C-CAP, S 6800P-50 B
C11	87-010-188-080	0E	C-CAP, S 6800P-50 B
C12	87-010-193-080	0E	C-CAP, S 0.033-25 F
C13	87-010-193-080	0E	C-CAP, S 0.033-25 F
C14	87-010-197-080	0E	C-CAP, S 0.01-25 B
C15	87-010-263-080	0E	CAP, E 100-10
C16	87-010-197-080	0E	C-CAP, S 0.01-25 B
C17	87-010-248-080	0E	CAP, E 220-10 SME
C18	87-010-400-080	0E	CAP, E 0.47-50 SME
C19	87-010-197-080	0E	C-CAP, S 0.01-25 B
C20	87-010-197-080	0E	C-CAP, S 0.01-25 B
C21	87-010-182-080	0E	G-CAP, S 2200P-50 B
C22	87-010-197-080	0E	C-CAP, S 0.01-25 B
C25	87-010-404-080	0E	CAP, E 4.7-50 SME
C27	87-010-382-080	0E	CAP, E 22-25 SME
C28	87-010-382-080	0E	CAP, E 22-25 SME
C29	87-010-403-080	0E	CAP, E 3.3-50 SME
C33	87-010-400-080	0E	CAP, E 0.47-50 SME
C35	87-010-178-080	0E	C-CAP, S 1000P-50 B
C36	87-010-260-080	0E	CAP, E 47-25 SME
C37	87-010-401-080	0E	CAP, E 1-50 SME
C38	87-010-186-080	0E	C-CAP, S 4700P-50 B
C39	87-010-401-080	0E	CAP, E 1-50 SME
C40	87-010-197-080	0E	C-CAP, S 0.01-25 B
C42	87-010-318-080	0E	C-CAP, S 47P-50 CH
C43	87-010-318-080	0E	C-CAP, S 47P-50 CH
C44	87-010-314-080	0E	C-CAP, S 22P-50 CH
C45	87-010-315-080	0E	C-CAP, S 27P-50 CH
C51	87-010-197-080	0E	C-CAP, S 0.01-25 B
C52	87-010-263-080	0E	CAP, E 100-10
C53	87-010-318-080	0E	C-CAP, S 47P-50 CH
C54	87-010-318-080	0E	C-CAP, S 47P-50 CH
C55	87-010-318-080	0E	C-CAP, S 47P-50 CH
C56	87-010-196-080	0E	C-CAP, S 0.1-25 F
C57	87-010-197-080	0E	C-CAP, S 0.01-25 B
C61	87-010-197-080	0E	C-CAP, S 0.01-25 B
C62	87-010-248-080	0E	CAP, E 220-10 SME
C65	87-010-402-080	0E	CAP, E 2.2-50 SME
C66	87-010-402-080	0E	CAP, E 2.2-50 SME
C69	87-010-178-080	0E	C-CAP, S 1000P-50 B
C70	87-010-178-080	0E	C-CAP, S 1000P-50 B
C80	87-010-196-080	0E	C-CAP, S 0.1-25 F
C81	87-010-221-080	0E	CAP, E 470-10
C82	87-010-197-080	0E	C-CAP, S 0.01-25 B
C83	87-010-196-080	0E	C-CAP, S 0.1-25 F
C84	87-010-196-080	0E	C-CAP, S 0.1-25 F
C85	87-010-196-080	0E	C-CAP, S 0.1-25 F
C86	87-010-248-080	0E	CAP, E 220-10 SME
C87	87-010-197-080	0E	C-CAP, S 0.01-25 B
C88	87-010-221-080	0E	CAP, E 470-10
C89	87-010-197-080	0E	C-CAP, S 0.01-25 B
C90	87-010-404-080	0E	CAP, E 4.7-50 SME
C100	87-010-260-080	0E	CAP, E 47-25 SME
C101	87-010-196-080	0E	C-CAP, S 0.1-25 F
C104	87-010-197-080	0E	C-CAP, S 0.01-25 B
C105	87-010-196-080	0E	C-CAP, S 0.1-25 F
C109	87-010-197-080	0E	C-CAP, S 0.01-25 B
C110	87-010-197-080	0E	C-CAP, S 0.01-25 B
C111	87-010-197-080	0E	C-CAP, S 0.01-25 B
C112	87-010-384-080	0E	CAP, E 100-25 SME
C113	87-010-322-080	0E	C-CAP, S 100P-50 CH
C114	87-010-322-080	0E	C-CAP, S 100P-50 CH
C115	87-010-318-080	0E	C-CAP, S 47P-50 CH
C116	87-012-156-080	0E	C-CAP, S 220P-50 CH
C121	87-010-196-080	0E	C-CAP, S 0.1-25 F
C131	87-010-404-080	0E	CAP, E 4.7-50 SME
C132	87-010-197-080	0E	C-CAP, S 0.01-25 B
C133	87-010-401-080	0E	CAP, E 1-50 SME
C151	87-010-318-080	0E	C-CAP, S 47P-50 CH
EM1	87-008-474-080	0E	F-BEAD, EMI BL02RN1
L1	87-003-295-080	0E	COIL, 10UH
L2	87-003-295-080	0E	COIL, 10UH
MOT2	87-045-305-010	1F	MOTOR, RF-500TB(LOADING)
R28	87-022-359-080	0E	C-RES, S 22K-1/10W F
R29	87-022-359-080	0E	C-RES, S 22K-1/10W F
SFR1	87-024-173-080	0E	SFR, 22K DIA6 V
SFR2	87-024-173-080	0E	SFR, 22K DIA6 V
SFR3	87-024-173-080	0E	SFR, 22K DIA6 V
SFR4	87-024-168-080	0E	SFR, 1K DIA6 V
X1	87-030-270-080	1B	VIB, XTAL 16.9344MHZ

REF.NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION

AC C.B

REF.NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
R100	87-022-394-050		RES, NF 0.47-1/4W J〈EXCEPT D〉
R101	87-022-394-050		RES, NF 0.47-1/4W J〈EXCEPT D〉
R101	87-025-466-050	0E	RES, NF 0.68-1/4WJ〈D〉
R102	87-025-466-050	0E	RES, NF 0.68-1/4W J〈D〉

AC VOLTAGE C.B

REF.NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
	87-033-147-010		CLAMP, FUSE〈HE, LH, HR, HD〉
⚠ F101	87-035-414-010		FUSE, T2A 250V UL〈HE, LH, HD〉
⚠ F101	87-035-367-010		FUSE, 3.15A 250V TE〈HR〉
⚠ S101	87-036-235-010		SW SLIDE ESD269〈HD〉
⚠ S101	87-036-229-010		SW, SL DP3C RA〈HE, LH, HR〉

VOLUME C.B

REF.NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
C701	87-010-178-080	0E	C-CAP, S 1000P-50 B
C702	87-010-178-080	0E	C-CAP, S 1000P-50 B
C703	87-010-154-080	0E	C-CAP, S 10P-50 CH
C704	87-010-154-080	0E	C-CAP, S 10P-50 CH
C705	87-010-322-080	0E	C-CAP, S 100P-50 CH
C706	87-010-322-080	0E	C-CAP, S 100P-50 CH
C707	87-010-197-080	0E	C-CAP, S 0.01-25 B
C708	87-010-197-080	0E	C-CAP, S 0.01-25 B
C709	87-010-184-080	0E	C-CAP, S 3300P-50 B
C710	87-010-184-080	0E	C-CAP, S 3300P-50 B
C711	87-012-154-080	0E	C-CAP, S 150P-50 CH
C712	87-012-154-080	0E	C-CAP, S 150P-50 CH
C713	87-012-365-080	0E	C-CAP, S 0.027-25V BK
C714	87-012-365-080	0E	C-CAP, S 0.027-25V BK
C715	87-010-318-080	0E	C-CAP, S 47P-50 CH
C716	87-010-318-080	0E	C-CAP, S 47P-50 CH
C717	87-010-186-080	0E	C-CAP, S 4700P-50 B
C718	87-010-186-080	0E	C-CAP, S 4700P-50 B
C719	87-010-994-080	0E	C-CAP, S 680P-50 CH
C720	87-010-994-080	0E	C-CAP, S 680P-50 CH
C721	87-010-402-040	0E	CAP, E 2.2-50 SME
C722	87-010-402-040	0E	CAP, E 2.2-50 SME
C723	87-010-401-040	0E	CAP, E 1-50 SME
C724	87-010-401-040	0E	CAP, E 1-50 SME
C725	87-010-320-080	0E	C-CAP, S 68P-50 CH
C726	87-010-320-080	0E	C-CAP, S 68P-50 CH
C727	87-010-248-040	0E	CAP, E 220-10 SME
C728	87-010-192-080	0E	C-CAP, S 0.022-50 F
C729	87-010-248-040	0E	CAP, E 220-10 SME
C730	87-010-384-040	0E	CAP, E 100-25 SME
C731	87-010-197-080	0E	C-CAP, S 0.01-25 B
C732	87-010-197-080	0E	C-CAP, S 0.01-25 B
MVR701	82-MA3-635-010	2A	VR, 50KBX2 (MO)

SW C.B

REF.NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
	82-NF5-653-010	1B	CABLE FFC, 6P-1.25
LED415	87-017-351-080	0E	LED, SEL6814A
LED416	87-017-351-080	0E	LED, SEL6814A
LED417	87-017-351-080	0E	LED, SEL6814A
S313	87-036-215-080	0E	SW, TACT EVQ-21404M
S314	87-036-215-080	0E	SW, TACT EVQ-21404M

DECK-1 C.B

REF.NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
CON501	87-009-350-019	0E	CONN, 7P PH H
SOL1	82-ZM1-618-010	1B	SOL ASSY, 27
SW4	87-036-110-010	0E	SW, PUSH SPPB 62
SW5	87-036-110-010	0E	SW, PUSH SPPB 62
SW6	87-036-110-010	0E	SW, PUSH SPPB 62

DECK-2 C.B

REF.NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
CON502	87-009-353-019	0E	CONN, 10P PH H WHT

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
M2	87-045-348-010	1H	MOT, SHW 2L 70
SFR1	87-024-170-080	0E	SFR, 3. 3K DIA 6V
SOL2	82-ZM1-618-010	1B	SOL ASSY, 27
SW2	87-036-110-010	0E	SW, PUSH SPPB 62
SW3	87-036-110-010	0E	SW, PUSH SPPB 62
SW4	87-036-110-010	0E	SW, PUSH SPPB 62
SW5	87-036-110-010	0E	SW, PUSH SPPB 62
SW6	87-036-110-010	0E	SW, PUSH SPPB 62

U/D SW C. B

S2	87-036-271-010	1B	SW, LVR 1-2-2

OPEN SW C. B

S1	87-036-271-010	1B	SW, LVR 1-2-2

CLOSE SW C. B

S3	87-036-109-010	0E	SW, PUSH SPPB 61

PHOTO C. B

PH1	87-026-573-010	1B	P-SNSR GP1S53V

RELAY-1 C. B

RELAY-2 C. B

MOTOR-1 C. B

M1	87-045-305-010	1F	MOTOR, RF-500TB(TURN TABLE)

MOTOR-2 C. B

M3	9X-262-513-210	2H	SLED MOTOR(SLED)
M4	+++	2H	SLED MOTOR(SPINDLE)
S4	91-572-085-110	1B	LEAF SW(INSIDE LIMIT)

ECHO C. B〈EXCEPT LH, K, D〉

C381	87-010-544-080		CAP, E 0. 1-50〈EXCEPT LH, K, D〉
C382	87-010-187-080		C-CAP, S 5600P-50〈EXCEPT LH, K, D〉
C383	87-010-175-080		C-CAP, S 560P-50〈EXCEPT LH, K, D〉
C384	87-015-785-080		C-CAP, 0. 1-25 F〈EXCEPT LH, K, D〉
C385	87-010-260-080		CAP, E 47-25 SME〈EXCEPT LH, K, D〉
C388	87-015-785-080		C-CAP, 0. 1-25 F〈EXCEPT LH, K, D〉
C389	87-010-187-080		C-CAP, S 5600P-50〈EXCEPT LH, K, D〉
C390	87-010-175-080		C-CAP, S 560P-50〈EXCEPT LH, K, D〉
C391	87-010-401-080		CAP, E 1-50 SME〈EXCEPT LH, K, D〉
C392	87-010-186-080		C-CAP, S 4700P-50〈EXCEPT LH, K, D〉
C393	87-010-263-080		CAP, E 100-10〈EXCEPT LH, K, D〉
C394	87-015-785-080		C-CAP, 0. 1-25 F〈EXCEPT LH, K, D〉
C395	87-010-322-080		C-CAP, S 100P-50〈EXCEPT LH, K, D〉
C396	87-010-322-080		C-CAP, S 100P-50〈EXCEPT LH, K, D〉
X301	87-030-211-080		VIB, CER KBR-2. 0MS〈EXCEPT LH, K, D〉

S C. B

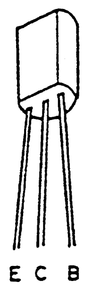
C1	87-010-384-080	0E	CAP, E 100-25 SME
R1	88-121-103-080	0E	RES, 10K-1/8W J

MISCELLANEOUS

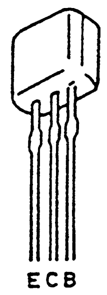
⚠	87-034-749-010		AC CORD (H) W/PLUG〈LH, HD〉
⚠	87-050-016-010		AC CORD ASSY, E〈E, Z〉
⚠	87-050-034-010		AC CORD ASSY, E〈HE, HR〉
⚠	87-050-029-010		AC CORD ASSY, K 3P〈K〉

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
⚠	87-050-023-010		AC CORD ASSY, U-2〈U〉
⚠	87-050-026-019	1C	AC CORD, D 1800MM〈D〉
⚠	87-085-184-010	0E	BUSHING, AC CORD D〈LH, D, HD〉
⚠	87-085-185-010		BUSHING, AC CORD E〈HE, HR, K, E, Z〉
⚠	87-085-189-010		BUSHING, CORD U〈U〉
⚠ PT101	82-NF5-623-010	2Y	PT, 2NF5 D〈D〉
⚠ PT101	82-NF5-624-010		PT, 2NF5 HE〈HE, LH, HR〉
⚠ PT101	82-NF5-627-010		PT, 2NF5 U〈U, HD〉
⚠ PT101	82-NF5-625-010		PT, 2NF5(E, K)〈K, E, Z〉
PH	87-046-355-010	1F	HEAD, PH HADKH2529B(D1)
RPH	87-046-356-010	2A	HEAD, RPH HADKH5581B(D2)

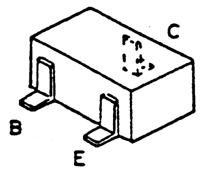
TRANSISTOR ILLUSTRATION



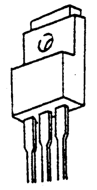
2SA952
2SA970
2SA1015
2SA1318
2SC1815
2SC3266
2SC3331



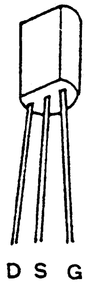
2SC1740
DTA114ES
DTA114TK
DTA114YS
DTA144ES
DTC114YS
2SA933



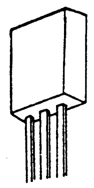
2SA1162
2SC2712
2SC2714
2SC3326
DTA114EK
DTA143EK
DTA144WK
DTC114TK
DTC114YK
DTC124
DTC143
DTC144



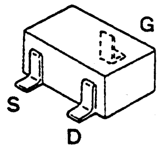
2SB1370



2SK246



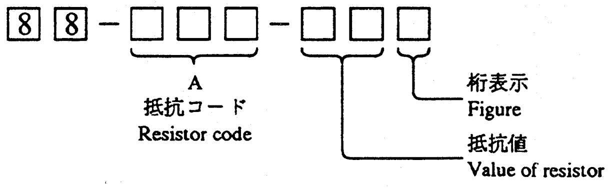
2SB1329



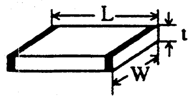
2SK211
2SK302

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

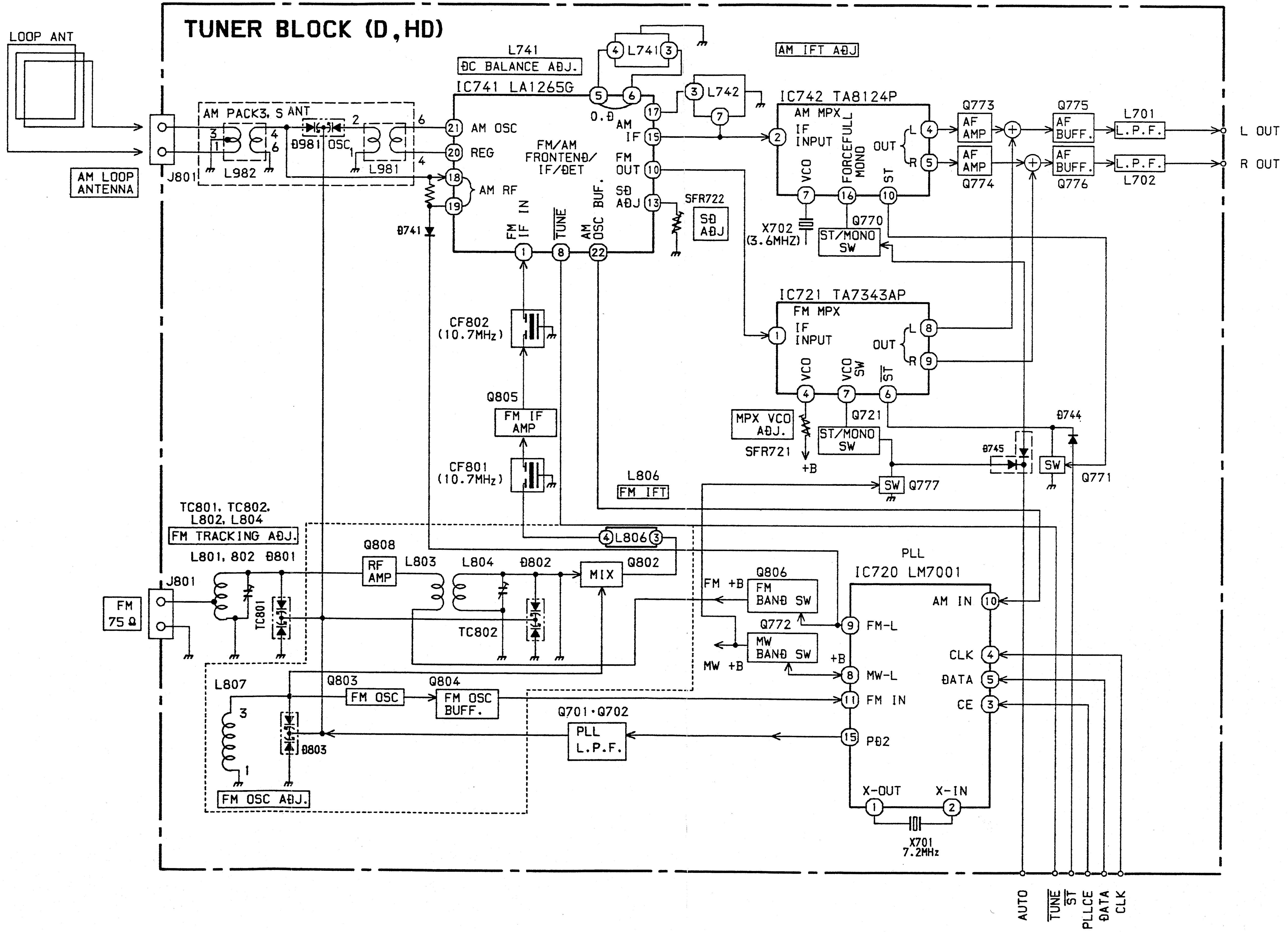
チップ抵抗部品コードの成り立ち
Chip resistor part coding



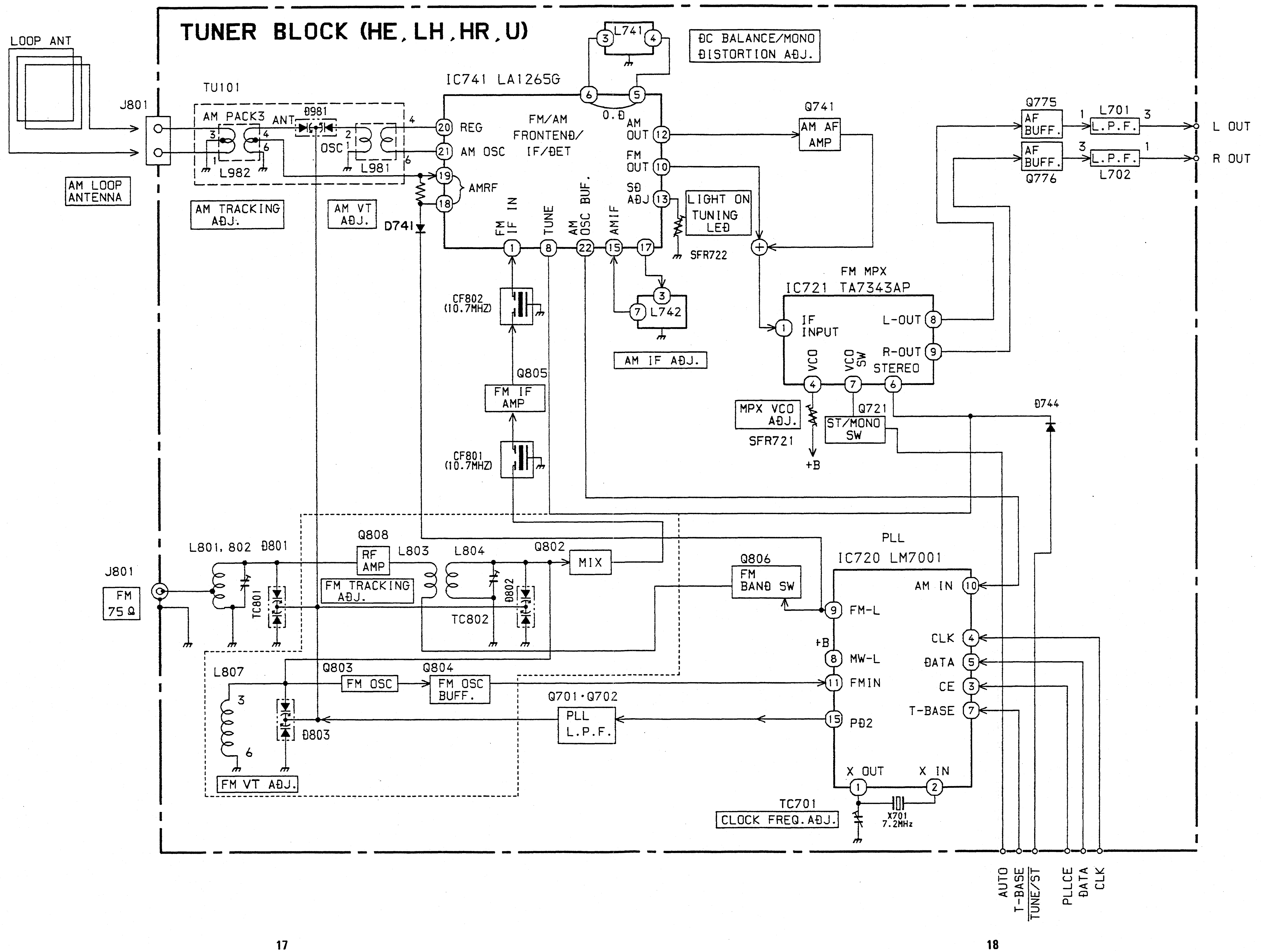
チップ抵抗
Chip resistor

Wattage 容量	Type 種類	Tolerance 許容誤差	Symbol 記号	Dimensions／寸法 (mm)				Resistor code : A 抵抗コード : A
				Form/外形	L	W	t	
1/32W	1608	±5%	CJ		1.6	0.8	0.35	108
1/10W	2125	±5%	CJ		2	1.25	1.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.5 ~0.7	128

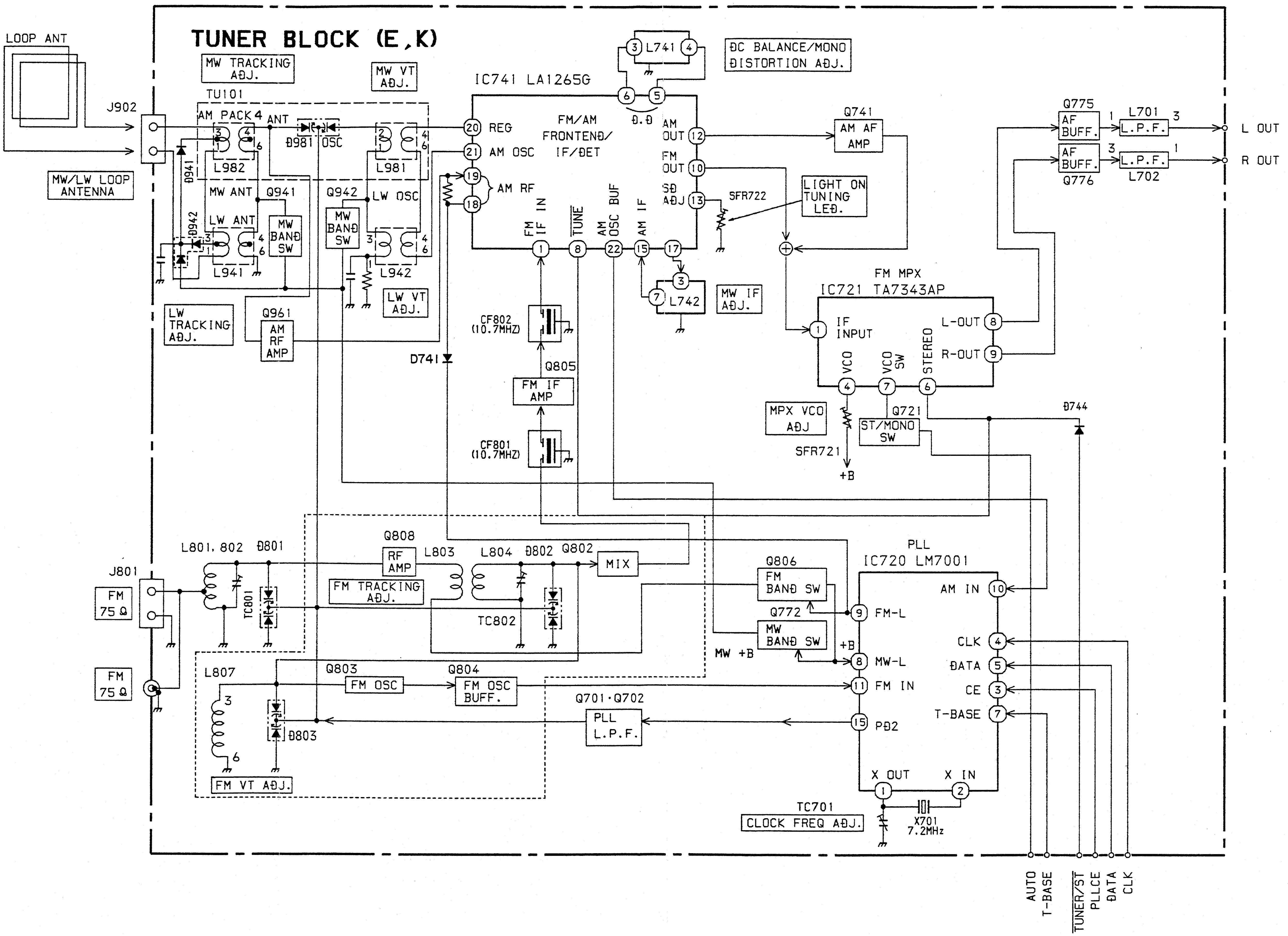
BLOCK DIAGRAM—1 (TUNER: D, HD)


TUNER BLOCK (D,HD)
LOOP ANT
AM LOOP ANTENNA
J801
AM PACK3, S ANT
L982
Ð981 OSC
L981
L741
ÐC BALANCE AÐJ.
L741
L742
IC741 LA1265G
AM OSC
REG
AM RF
FM/AM FRONTENÐ/ IF/ÐET
O.Ð
AM IF
FM OUT
SÐ AÐJ
FM IF IN
TUNE
AM OSC BUF.
Ð741
SFR722
SÐ AÐJ
AM IFT AÐJ
IC742 TA8124P
AM MPX
IF INPUT
FORCEFULL MONO
OUT
VCO
ST
X702 (3.6MHZ)
Q770
ST/MONO SW
Q773
AF AMP
Q774
Q775
AF BUFF.
Q776
L701
L.P.F.
L702
L OUT
R OUT
IC721 TA7343AP
FM MPX
IF INPUT
OUT
VCO
VCO SW
ST
MPX VCO AÐJ.
SFR721
+B
Q721
ST/MONO SW
Ð744
Ð745
SW
Q771
SW Q777
CF802 (10.7MHz)
Q805
FM IF AMP
CF801 (10.7MHz)
L806
FM IFT
TC801, TC802, L802, L804
FM TRACKING AÐJ.
L801, 802 Ð801
J801
FM 75 Ω
TC801
Q808
RF AMP
L803
L804
Ð802
MIX
Q802
TC802
L806
L807
Q803
FM OSC
Q804
FM OSC BUFF.
Ð803
FM OSC AÐJ.
Q701·Q702
PLL L.P.F.
FM +B
Q806
FM BANÐ SW
Q772
MW BANÐ SW
MW +B
+B
PLL
IC720 LM7001
AM IN
FM-L
MW-L
FM IN
PÐ2
CLK
ÐATA
CE
X-OUT
X-IN
X701 7.2MHz
AUTO
TUNE
ST
PLLCE
ÐATA
CLK

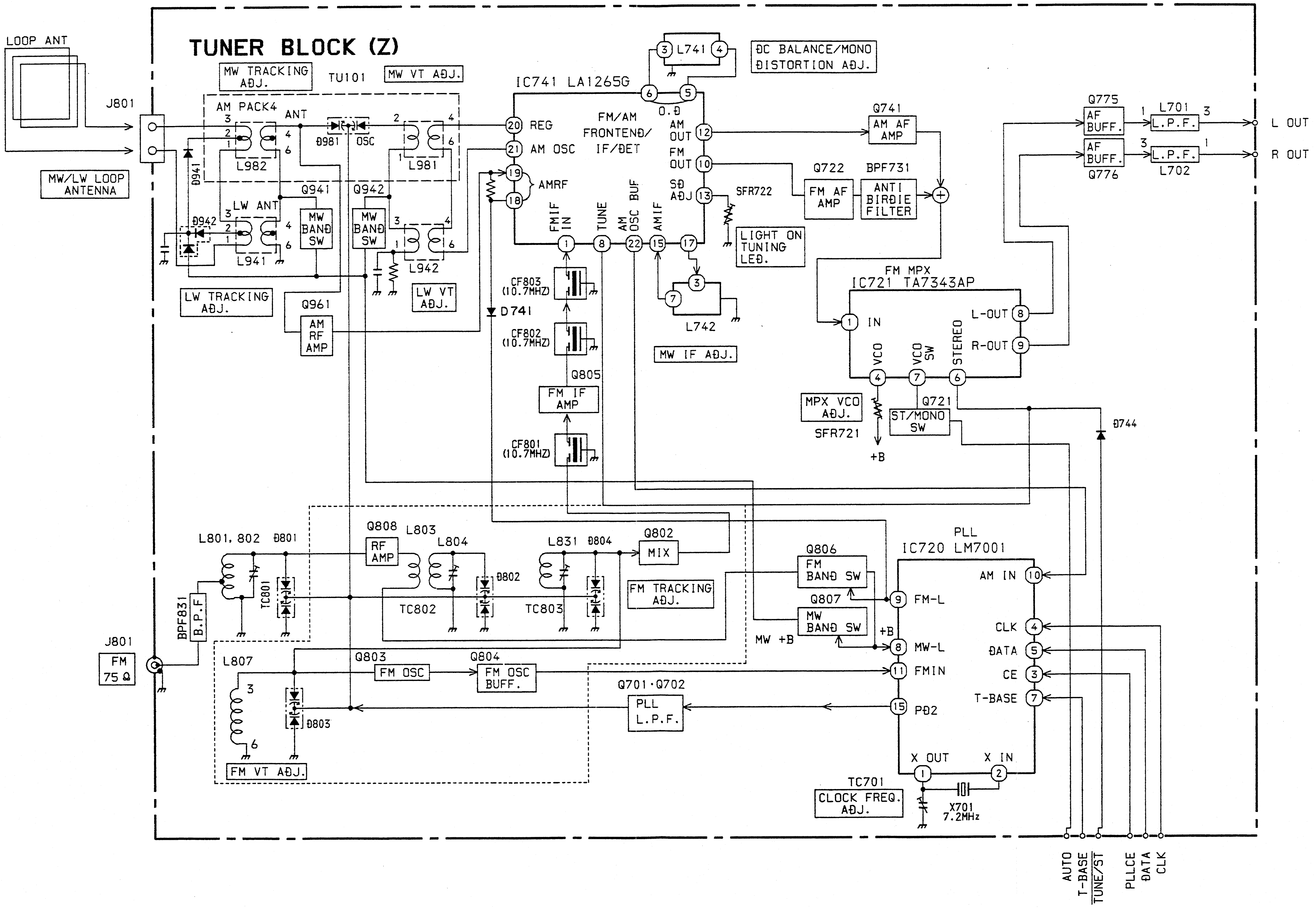
BLOCK DIAGRAM—2 (TUNER: HE, LH, HR, U)


TUNER BLOCK (HE, LH, HR, U)
LOOP ANT
J801
AM LOOP ANTENNA
TU101
AM PACK3
ANT
Ð981
OSC
L982
L981
AM TRACKING ADJ.
AM VT ADJ.
D741
L741
ÐC BALANCE/MONO ÐISTORTION AÐJ.
IC741 LA1265G
0.Ð
REG
AM OSC
AMRF
FM/AM FRONTENÐ/ IF/ÐET
AM OUT
FM OUT
SÐ AÐJ
LIGHT ON TUNING LEÐ
SFR722
FM IF IN
TUNE
AM OSC BUF.
AMIF
L742
AM IF AÐJ.
CF802 (10.7MHZ)
Q805
FM IF AMP
CF801 (10.7MHZ)
Q741
AM AF AMP
FM MPX
IC721 TA7343AP
IF INPUT
L-OUT
R-OUT
VCO
VCO SW
STEREO
MPX VCO AÐJ.
SFR721
+B
Q721
ST/MONO SW
Ð744
Q775
AF BUFF.
Q776
L701
L.P.F.
L702
L OUT
R OUT
J801
FM 75Ω
L801, 802
Ð801
TC801
Q808
RF AMP
L803
FM TRACKING AÐJ.
L804
Q802
Ð802
TC802
MIX
Q806
FM BANÐ SW
L807
Q803
FM OSC
Q804
FM OSC BUFF.
Ð803
FM VT AÐJ.
Q701·Q702
PLL L.P.F.
PLL
IC720 LM7001
AM IN
FM-L
+B
MW-L
FMIN
PÐ2
CLK
ÐATA
CE
T-BASE
X OUT
X IN
TC701
CLOCK FREQ.AÐJ.
X701 7.2MHz
AUTO
T-BASE
TUNE/ST
PLLCE
ÐATA
CLK

BLOCK DIAGRAM—3 (TUNER: E, K)

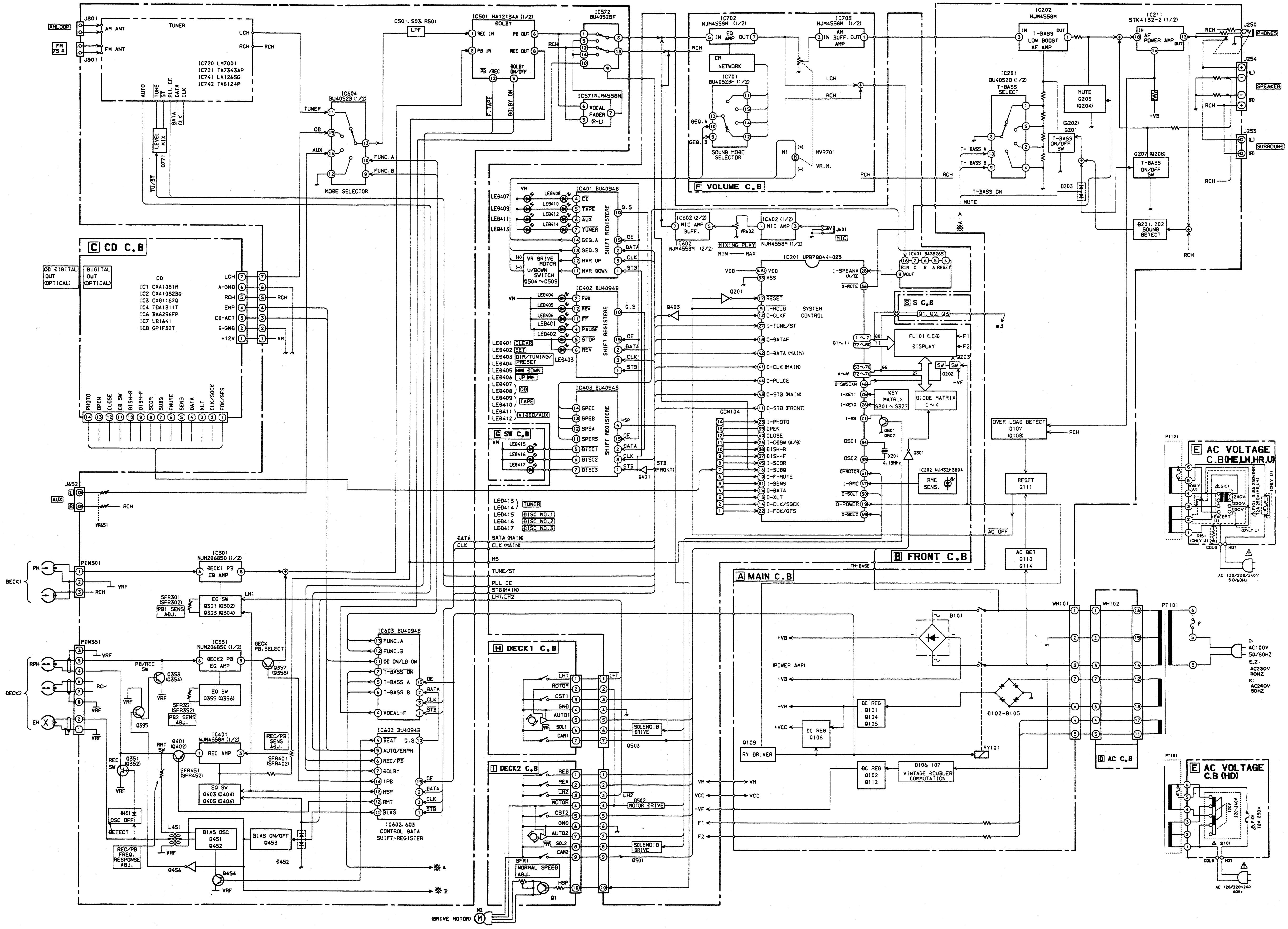

TUNER BLOCK (E,K)
LOOP ANT
MW/LW LOOP ANTENNA
J902
MW TRACKING ADJ.
MW VT ADJ.
TU101
AM PACK 4
ANT
D981
OSC
L982
L981
D941
MW ANT
Q941
Q942
LW OSC
D942
LW ANT
MW BAND SW
L941
L942
LW VT ADJ.
LW TRACKING ADJ.
Q961
AM RF AMP
IC741 LA1265G
L741
DC BALANCE/MONO DISTORTION ADJ.
D.D
REG
AM OSC
FM/AM FRONTEND/ IF/DET
AM RF
AM OUT
FM OUT
SD ADJ
FM IF IN
TUNE
AM OSC BUF
AM IF
SFR722
LIGHT ON TUNING LED.
Q741
AM AF AMP
L742
MW IF ADJ.
CF802 (10.7MHZ)
D741
Q805
FM IF AMP
CF801 (10.7MHZ)
FM MPX
IC721 TA7343AP
IF INPUT
L-OUT
R-OUT
VCO
VCO SW
STEREO
MPX VCO ADJ
SFR721
+B
Q721
ST/MONO SW
D744
Q775
AF BUFF.
L701
L.P.F.
L OUT
AF BUFF.
Q776
L.P.F.
L702
R OUT
J801
FM 75 Ω
FM 75 Ω
L801, 802
D801
TC801
Q808
RF AMP
L803
L804
D802
Q802
MIX
FM TRACKING ADJ.
TC802
L807
Q803
FM OSC
Q804
FM OSC BUFF.
D803
FM VT ADJ.
Q701·Q702
PLL L.P.F.
Q806
FM BAND SW
Q772
MW BAND SW
MW +B
+B
PLL
IC720 LM7001
AM IN
FM-L
MW-L
FM IN
PD2
CLK
DATA
CE
T-BASE
X OUT
X IN
TC701
CLOCK FREQ ADJ.
X701 7.2MHz
AUTO
T-BASE
TUNER/ST
PLLCE
DATA
CLK

BLOCK DIAGRAM—4 (TUNER: Z)

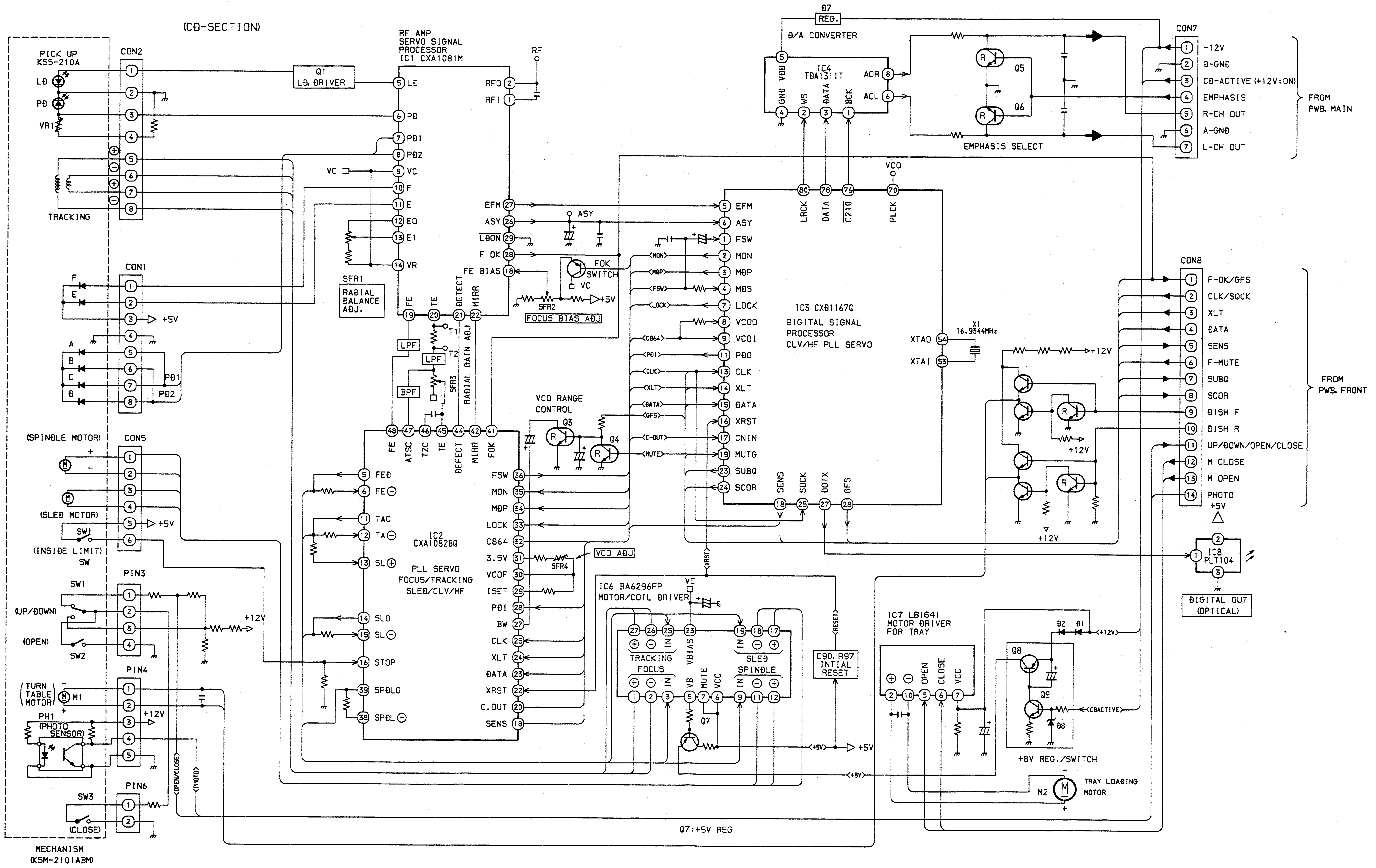


TUNER BLOCK (Z)
LOOP ANT
J801
MW/LW LOOP ANTENNA
MW TRACKING ADJ.
TU101
MW VT ADJ.
AM PACK4
ANT
Đ981
OSC
L982
L981
Đ941
Q941
Q942
LW ANT
Đ942
MW BAND SW
L941
L942
LW TRACKING ADJ.
LW VT ADJ.
Q961
AM RF AMP
IC741 LA1265G
L741
ĐC BALANCE/MONO ĐISTORTION ADJ.
REG
AM OSC
FM/AM FRONTENĐ/ IF/ĐET
0.Đ
AM OUT
FM OUT
SĐ AĐJ
AMRF
FMIF IN
TUNE
AM OSC BUF
AMIF
SFR722
LIGHT ON TUNING LEĐ.
L742
MW IF AĐJ.
CF803 (10.7MHZ)
D741
CF802 (10.7MHZ)
Q805
FM IF AMP
CF801 (10.7MHZ)
Q741
AM AF AMP
Q722
FM AF AMP
BPF731
ANTI BIRĐIE FILTER
Q775
AF BUFF.
Q776
L701
L.P.F.
L702
L OUT
R OUT
FM MPX
IC721 TA7343AP
IN
L-OUT
R-OUT
VCO
VCO SW
STEREO
MPX VCO ADJ.
SFR721
+B
Q721
ST/MONO SW
Đ744
L801, 802
Đ801
Q808
RF AMP
L803
L804
L831
Đ804
Q802
MIX
Đ802
TC801
TC802
TC803
FM TRACKING ADJ.
BPF831
B.P.F
J801
FM 75 Ω
L807
Q803
FM OSC
Q804
FM OSC BUFF.
Đ803
FM VT ADJ.
Q806
FM BAND SW
Q807
MW BAND SW
MW +B
+B
Q701·Q702
PLL L.P.F.
PLL
IC720 LM7001
AM IN
FM-L
MW-L
FMIN
PĐ2
CLK
ĐATA
CE
T-BASE
X OUT
X IN
TC701
CLOCK FREQ. ADJ.
X701 7.2MHz
AUTO
T-BASE
TUNE/ST
PLLCE
ĐATA
CLK

BLOCK DIAGRAM—5 (MAIN)

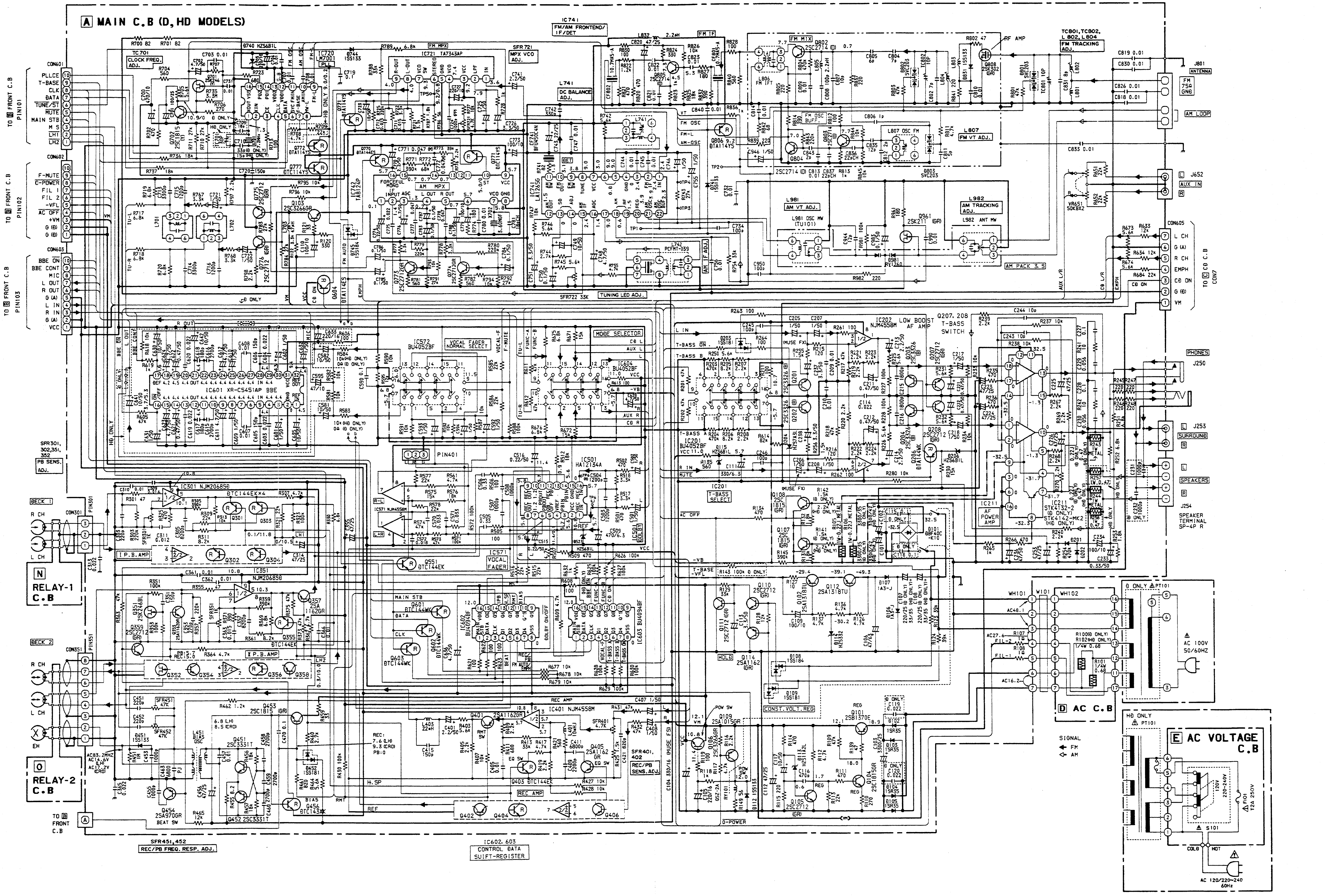

AM LOOP
FM 75 Ω
J801
TUNER
AM ANT
FM ANT
IC720 LM7001
IC721 TA7343AP
IC741 LA1265G
IC742 TA8124P
LCH
RCH
LEVEL MIX
Q771
C501, 503, R501
LPF
IC501 HA12134A (1/2) DOLBY
REC IN
PB OUT
PB IN
REC OUT
PB/REC
DOLBY ON/OFF
F.TAPE
DOLBY ON
IC572 BU4052BF
IC571 NJM4558M
VOCAL FADER (R-L)
IC604 BU4052B (1/2)
TUNER
CD
AUX
FUNC.A
FUNC.B
MODE SELECTOR
IC702 NJM4558M (1/2)
EQ AMP
IC703 NJM4558M (1/2)
AM BUFF. AMP
CR NETWORK
IC701 BU4052BF (1/2)
GEQ.A
GEQ.B
SOUND MODE SELECTOR
M1
MVR701
VR.M.
F VOLUME C.B
IC202 NJM4558M
T-BASS LOW BOOST AF AMP
IC201 BU4052B (1/2) T-BASS SELECT
MUTE Q203 (Q204)
T-BASS ON/OFF SW
Q202 Q201
Q207 (Q208)
IC211 STK4132-2 (1/2)
AF POWER AMP
-VB
J250 PHONES
J254 SPEAKER
J253 SURROUND
T-BASS ON
MUTE
D203
Q201, 202 SOUND DETECT
C CD C.B
CD DIGITAL OUT (OPTICAL)
IC1 CXA1081M
IC2 CXA1082BQ
IC3 CX01167Q
IC4 TDA1311T
IC6 BA6296FP
IC7 LB1641
IC8 GP1F32T
A-GND
EMP
CD-ACT
D-GND
+12V
PHOTO
OPEN
CLOSE
CD SW
DISH-R
DISH-F
SCOR
SUBQ
FMUTE
SENS
DATA
XLT
CLK/SQCK
FOK/GFS
IC401 BU4094B
IC402 BU4094B
IC403 BU4094B
SHIFT REGISTERE
VR DRIVE MOTOR
U/DOWN SWITCH Q504~Q509
MVR UP
MVR DOWN
CLEAR
SET
DIR/TUNING/PRESET
DOWN
UP
CD
TAPE
VIDEO/AUX
G SW C.B
DISC1
DISC2
DISC3
TUNER
DISC NO.1
DISC NO.2
DISC NO.3
IC602 (2/2) MIC AMP BUFF.
IC602 (1/2) MIC AMP
IC602 NJM4558M
MIXING PLAY
MIN — MAX
J601 MIC
IC201 UPD78044-023
SYSTEM CONTROL
Q201
Q403
IC601 BA3826S
S S C.B
FL101 (LCD) DISPLAY
KEY MATRIX S301~S327
DIODE MATRIX
X201 4.19MHz
Q801 Q802
IC202 NJM2H360A
RMC SENS.
CON104
OVER LOAD DETECT Q107 (Q108)
RESET Q111
AC DET Q110 Q114
AC OFF
B FRONT C.B
A MAIN C.B
E AC VOLTAGE C.B(HE,LH,HR,U)
E AC VOLTAGE C.B (HD)
J652 AUX
VR651
DATA (MAIN)
CLK (MAIN)
MS
TUNE/ST
PLL CE
STB (MAIN)
LH1, LH2
PIN301
DECK1
IC301 NJM2068SD (1/2) DECK1 PB EQ AMP
SFR301 (SFR302) PB1 SENS ADJ.
EQ SW Q301 (Q302) Q303 (Q304)
PIN351
DECK2
IC351 NJM2068SD (1/2) DECK2 PB EQ AMP
DECK PB.SELECT
Q357 (Q358)
PB/REC SW
Q353 (Q354)
EQ SW Q355 (Q356)
SFR351 (SFR352) PB2 SENS ADJ.
Q395
IC401 NJM4558M (1/2) REC AMP
REC/PB SENS ADJ.
SFR401 (SFR402)
SFR451 (SFR452)
EQ SW Q403 (Q404) Q405 (Q406)
RMT SW Q401 (Q402)
REC SW Q351 (Q352)
D451 OSC OFF DETECT
L451
BIAS OSC Q451 Q452
BIAS ON/OFF Q453
D452
REC/PB FREQ. RESPONSE ADJ.
Q456
Q454
IC603 BU4094B
CD ON/LD ON
T-BASS ON
T-BASS A
T-BASS B
VOCAL-F
IC602 BU4094B
BEAT
AUTO/EMPH
REC/PB
DOLBY
IPB
HSP
RMT
BIAS
IC602, 603 CONTROL DATA SHIFT-REGISTER
H DECK1 C.B
MOTOR
CST1
AUTO1
SOL1
CAM1
SOLENOID DRIVE
Q503
I DECK2 C.B
REB
REA
LH2
CST2
AUTO2
SOL2
CAM2
Q502 MOTOR DRIVE
Q501
SFR1 NORMAL SPEED ADJ.
Q1
M2 (DRIVE MOTOR)
+VB
(POWER AMP)
-VB
+VM
+VCC
D101
D102~D105
DC REG Q101 Q104 Q105
DC REG Q106
Q109 RY DRIVER
RY101
DC REG Q102 Q112
D106, 107 VINTAGE DOUBLER COMMUTATION
VM
VCC
-VF
F1
F2
WH101
WH102
D AC C.B
PT101
AC100V 50/60HZ
AC230V 50HZ
AC240V 50HZ
AC 120/220/240V 50/60Hz
AC 120/220-240 60Hz
S101

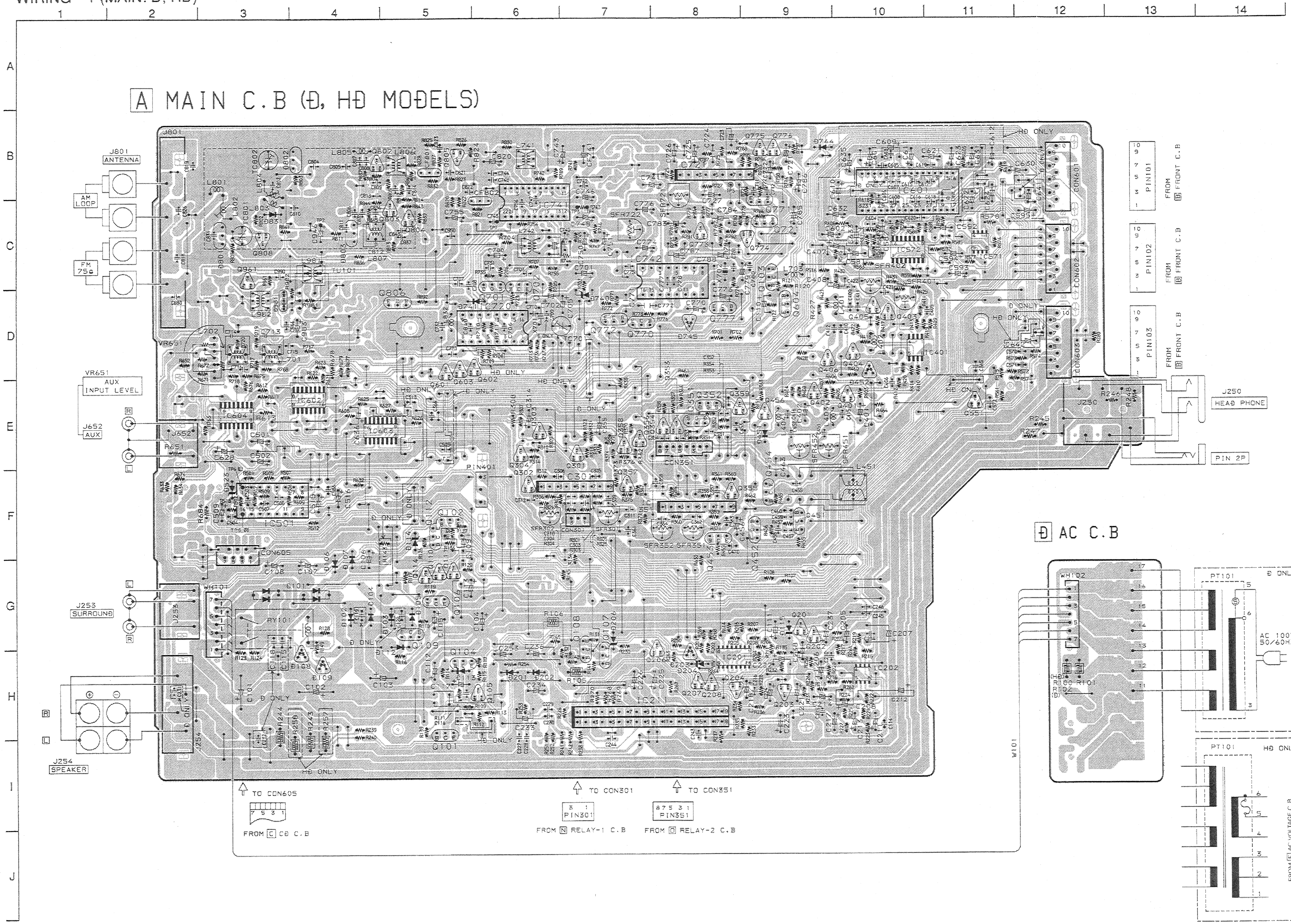
BLOCK DIAGRAM—6 (CD)



(CD-SECTION)
PICK UP KSS-210A
LD
PD
VR1
TRACKING
CON2
CON1
CON5
PIN3
PIN4
PIN6
(SPINDLE MOTOR)
(SLED MOTOR)
(INSIDE LIMIT) SW
SW1
(UP/DOWN)
(OPEN)
SW2
(TURN TABLE MOTOR) M1
PH1 (PHOTO SENSOR)
SW3
(CLOSE)
MECHANISM (KSM-2101ABM)
Q1 LD DRIVER
RF AMP SERVO SIGNAL PROCESSOR IC1 CXA1081M
SFR1 RADIAL BALANCE ADJ.
SFR2 FOCUS BIAS ADJ
FOK SWITCH
SFR3 RADIAL GAIN ADJ
LPF
BPF
VCO RANGE CONTROL
Q3
Q4
IC2 CXA1082BQ PLL SERVO FOCUS/TRACKING SLED/CLV/HF
SFR4 VCO ADJ
IC3 CXD1167Q DIGITAL SIGNAL PROCESSOR CLV/HF PLL SERVO
X1 16.9344MHz
D7 REG.
D/A CONVERTER
IC4 TDA1311T
Q5
Q6
EMPHASIS SELECT
CON7
+12V
D-GND
CD-ACTIVE (+12V:ON)
EMPHASIS
R-CH OUT
A-GND
L-CH OUT
FROM PWB. MAIN
CON8
F-OK/GFS
CLK/SQCK
XLT
DATA
SENS
F-MUTE
SUBQ
SCOR
DISH F
DISH R
UP/DOWN/OPEN/CLOSE
M CLOSE
M OPEN
PHOTO
FROM PWB. FRONT
IC8 PLT104
DIGITAL OUT (OPTICAL)
IC6 BA6296FP MOTOR/COIL DRIVER
TRACKING FOCUS
SLED SPINDLE
Q7
C90, R97 INTIAL RESET
IC7 LB1641 MOTOR DRIVER FOR TRAY
Q8
Q9
D8
D2 D1
+8V REG./SWITCH
TRAY LOADING MOTOR M2
Q7:+5V REG

SCHEMATIC DIAGRAM—1 (MAIN: D, HD)


A MAIN C.B (D, HD MODELS)
IC741 FM/AM FRONTEND/IF/DET
IC720 LM7001 PLL
IC721 TA7343AP
TC701 CLOCK FREQ. ADJ.
SFR721 MPX VCO ADJ.
L741 DC BALANCE ADJ.
FM MIX
FM IF
RF AMP
TC801, TC802, L802, L804 FM TRACKING ADJ.
J801 ANTENNA
FM 75Ω GND
AM LOOP
L807 FM VT ADJ.
L981 AM VT ADJ.
L982 AM TRACKING ADJ.
AM PACK 3.5
J652 AUX IN
SFR722 33K TUNING LED ADJ.
TO B FRONT C.B PIN101
TO B FRONT C.B PIN102
TO B FRONT C.B PIN103
CON601
CON602
CON603
CON605
TO C CD C.B CON7
IC601 XR-C5451AP BBE
IC572 BU4052BF
VOCAL FADER NORMAL SELECT
IC604 BU4052BF
MODE SELECTOR
IC202 LOW BOOST NJM4558M AF AMP
Q207, 208 T-BASS SWITCH
PHONES J250
J253 SURROUND
SPEAKERS
J254 SPEAKER TERMINAL SP-4P R
IC211 STK4132-2 (D ONLY) STK4142-MK2 (HD ONLY)
AF POWER AMP
IC201 BU4052BF
T-BASS SELECT
IC501 HA12134A
IC571 NJM4558M
IC571 VOCAL FADER
PIN401
SFR301, 302, 351, 352 PB SENS. ADJ.
IC301 NJM2068SD
IC351 NJM2068SD
P.B. AMP
BECK 1
BECK 2
CON301
CON351
N RELAY-1 C.B
O RELAY-2 C.B
IC602 BU4094BF
IC603 BU4094BF
MAIN STB
DATA
CLK
IC401 NJM4558M
REC AMP
SFR401, 402 REC/PB SENS. ADJ.
BIAS OSC
BEAT SW
EQ SW
H.SP
REF
TO B FRONT C.B
SFR451, 452 REC/PB FREQ. RESP. ADJ.
IC602, 603 CONTROL DATA SHIFT-REGISTER
POW SW
CONST. VOLT. REG
D-POWER
HOLD
REG
D AC C.B
D ONLY PT101
AC 100V 50/60HZ
HD ONLY PT101
E AC VOLTAGE C.B
220-240V
120V
F101 T2A 250V
S101
COLD
HOT
AC 120/220-240 60Hz
SIGNAL
FM
AM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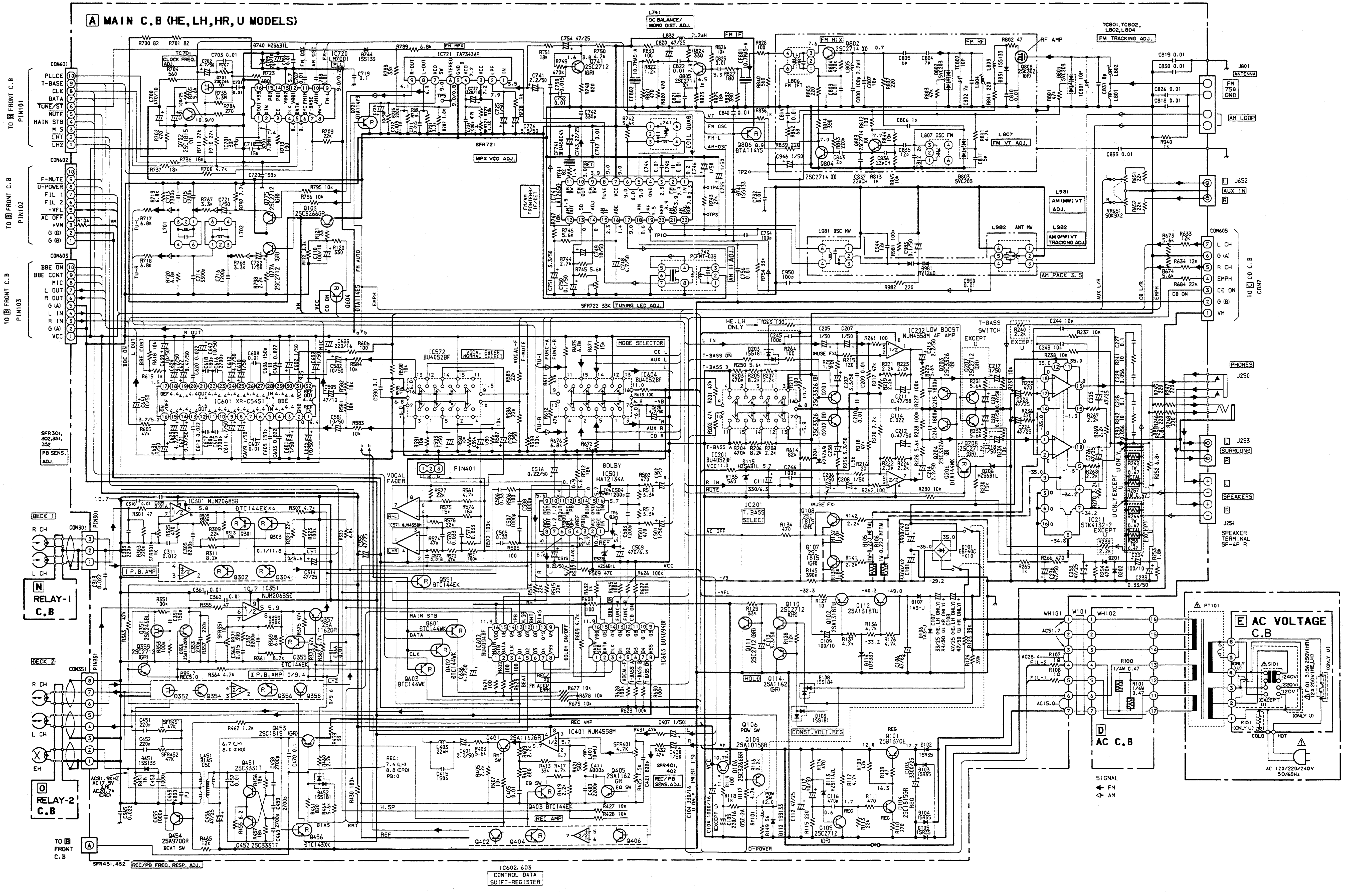
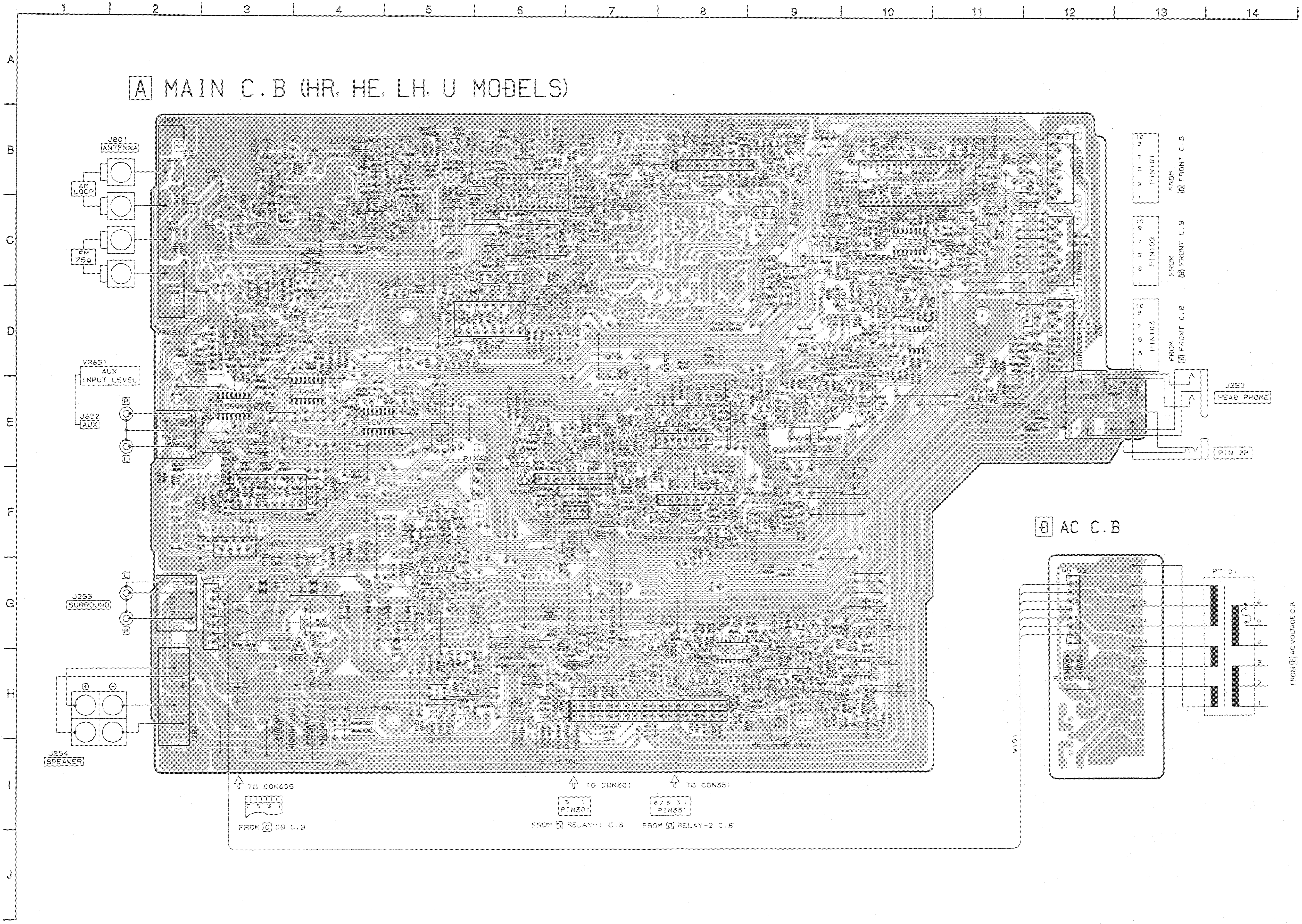
I
J
A MAIN C.B (Đ, HĐ MODELS)
J801
ANTENNA
AM LOOP
FM 75Ω
VR651
AUX INPUT LEVEL
J652
AUX
R
L
J253
SURROUND
J254
SPEAKER
+
−
HĐ ONLY
Đ ONLY
PIN101
FROM B FRONT C.B
PIN102
FROM B FRONT C.B
PIN103
FROM B FRONT C.B
J250
HEAD PHONE
PIN 2P
Đ AC C.B
WH102
PT101
Đ ONLY
AC 100V 50/60HZ
HĐ ONLY
FROM E AC VOLTAGE C.B
W101
TO CON605
FROM C CD C.B
TO CON301
PIN301
FROM N RELAY-1 C.B
TO CON351
PIN351
FROM O RELAY-2 C.B

SCHEMATIC DIAGRAM—2 (MAIN: HE, LH, HR, U)


A MAIN C.B (HE,LH,HR,U MODELS)
TO B FRONT C.B PIN101
TO B FRONT C.B PIN102
TO B FRONT C.B PIN103
CON601
CON602
CON603
IC720 LM7001 PLL
IC721 TA7343AP
FM MPX
MPX VCO ADJ.
SFR721
DC BALANCE/ MONO DIST. ADJ.
FM IF
FM MIX
FM RF
RF AMP
FM VT ADJ.
FM TRACKING ADJ.
TC801,TC802, L802,L804
J801 ANTENNA
FM 75Ω GND
AM LOOP
L981 AM (MW) VT ADJ.
L982 AM (MW) VT TRACKING ADJ.
AM PACK 3.S
TUNING LED ADJ.
SFR722 33K
J652 AUX IN
CON605
TO C CD C.B CON7
L CH
R CH
EMPH
CD ON
VM
IC601 XR-C5451
PB SENS. ADJ.
SFR301, 302,351, 352
IC572 BU4052BF
VOCAL FADER NORMAL SELECT
MODE SELECTOR
IC604 BU4052BF
IC202 LOW BOOST NJM4558M AF AMP
T-BASS SWITCH
EXCEPT U
PHONES J250
J253 SURROUND
SPEAKERS
J254 SPEAKER TERMINAL SP-4P R
IC211 STK4132-2 EXCEPT
IC201 T.BASS SELECT
DOLBY IC501 HA12134A
IC301 NJM2068SD
IC351 NJM2068SD
I.P.B.AMP
DECK 1
DECK 2
CON301
CON351
N RELAY-1 C.B
O RELAY-2 C.B
IC401 NJM4558M
REC AMP
REC/PB SENS. ADJ.
SFR401, 402
IC602 BU4094BF
IC603 BU4094BF
DOLBY ON/OFF
MAIN STB
CONST. VOLT. REG
HOLD
D-POWER
D AC C.B
E AC VOLTAGE C.B
PT101
S101
F101 3.15A 250V (HR) T2A 250V (HE,LH)
AC 120/220/240V 50/60Hz
SIGNAL
FM
AM
TO B FRONT C.B
SFR451,452 REC/PB FREQ. RESP. ADJ.
IC602,603 CONTROL DATA SHIFT-REGISTER

WIRING—2 (MAIN: HE, LH, HR, U)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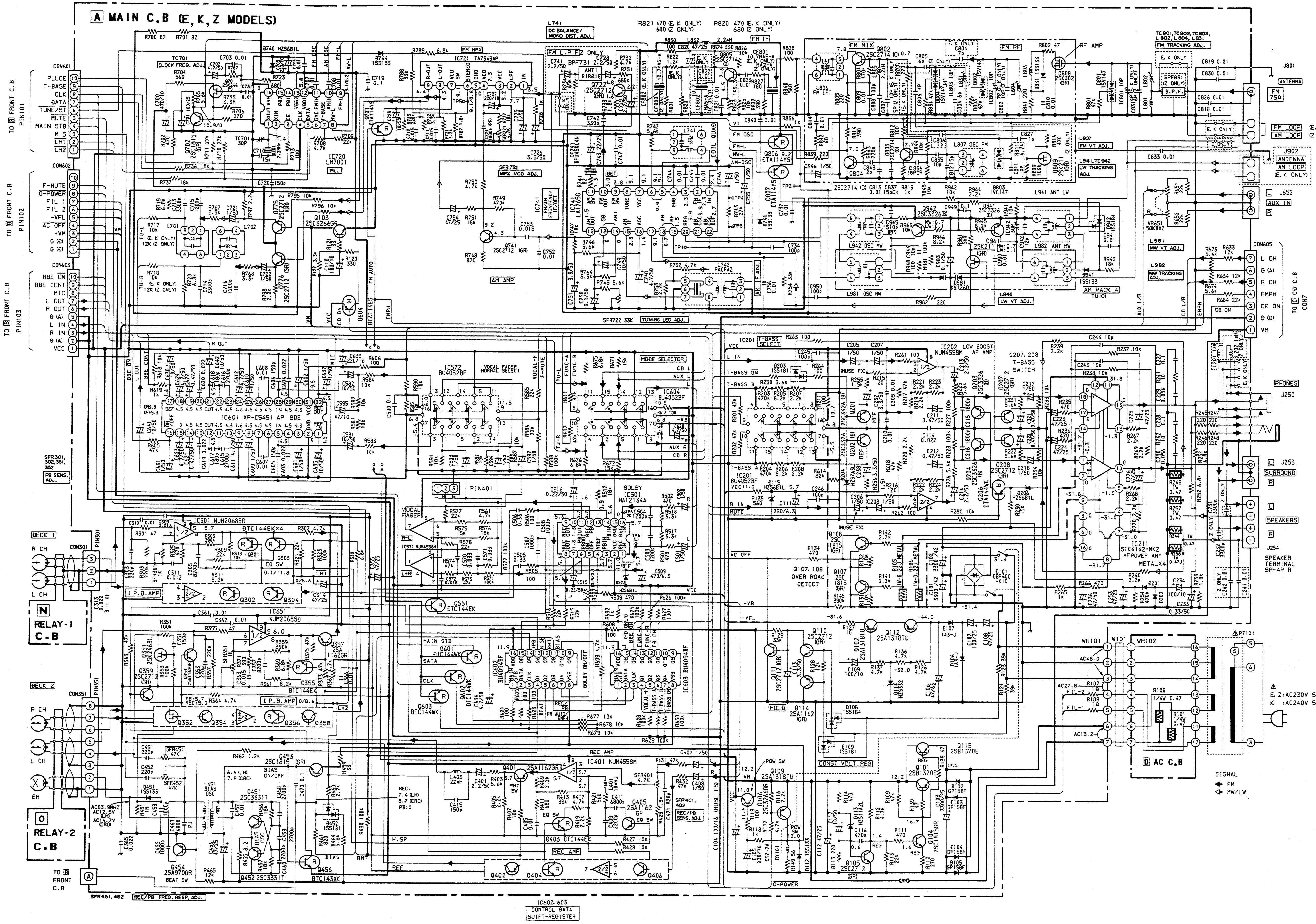
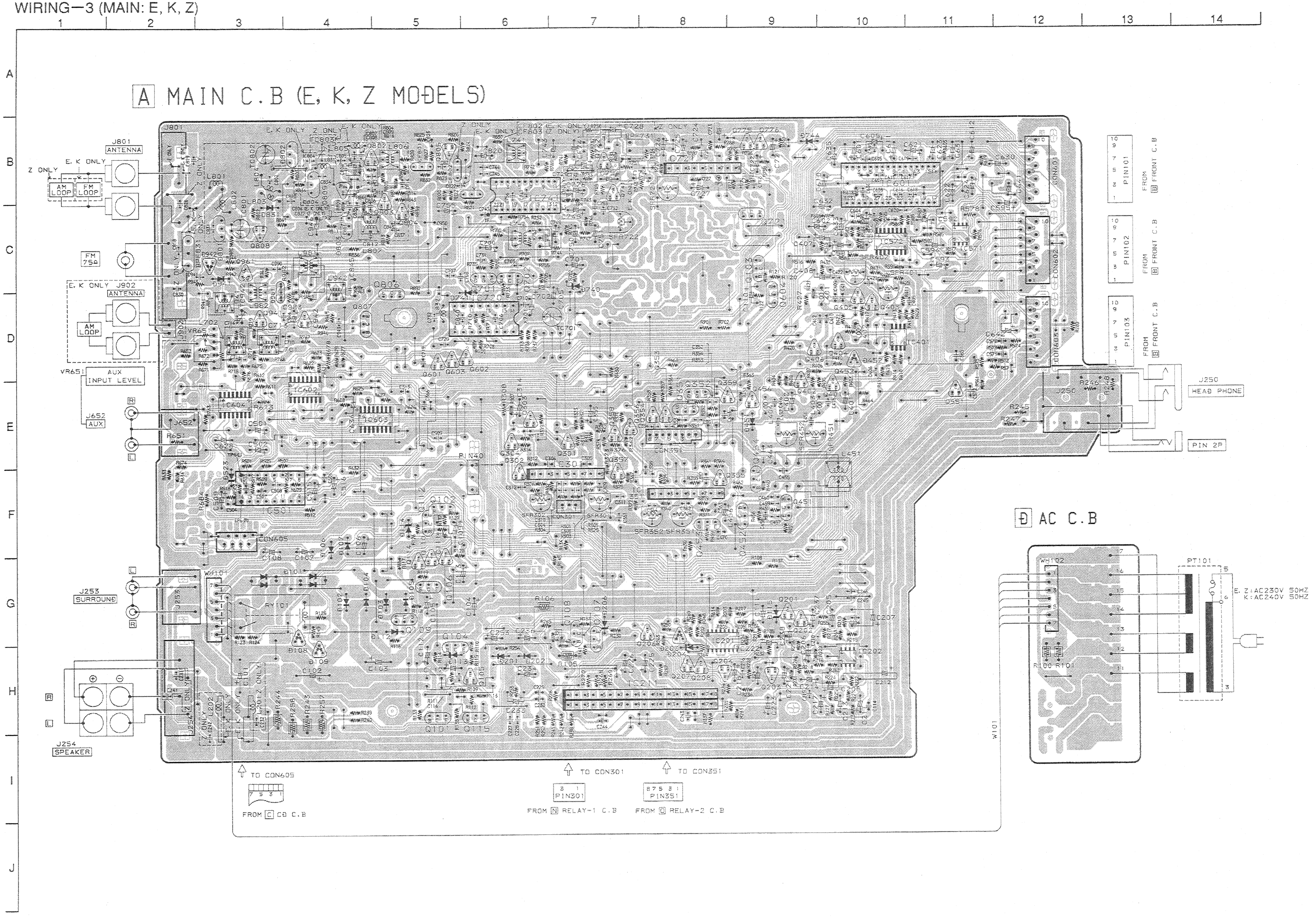
D
E
F
G
H
I
J
A MAIN C.B (HR, HE, LH, U MODELS)
J801 ANTENNA
AM LOOP
FM 75Ω
VR651 AUX INPUT LEVEL
J652 AUX
R
L
J253 SURROUND
J254 SPEAKER
⊕
⊖
CON601
CON602
CON603
PIN101 FROM B FRONT C.B
PIN102 FROM B FRONT C.B
PIN103 FROM B FRONT C.B
J250 HEAD PHONE
PIN 2P
PIN401
CON351
CON301
CON605
HE·LH·HR ONLY
HE·LH ONLY
U ONLY
W101
TO CON605
FROM C CD C.B
TO CON301
PIN301
FROM N RELAY-1 C.B
TO CON351
PIN351
FROM O RELAY-2 C.B
Đ AC C.B
WH102
PT101
R100 R101
FROM E AC VOLTAGE C.B

SCHEMATIC DIAGRAM—3 (MAIN: E, K, Z)


A MAIN C.B (E, K, Z MODELS)
CON601
PLLCE
T-BASE
CLK
DATA
TUNE/ST
MUTE
MAIN STB
M S
LH1
LH2
TO B FRONT C.B PIN101
CON602
F-MUTE
O-POWER
FIL 1
FIL 2
-VFL
AC OFF
+VM
G (D)
G (D)
TO B FRONT C.B PIN102
CON603
BBE ON
BBE CONT
MIC
L OUT
R OUT
G (A)
L IN
R IN
G (A)
VCC
TO B FRONT C.B PIN103
IC720 LM7001 PLL
IC721 TA7343AP
FM MPX
TC701 CLOCK FREQ. ADJ.
L741 DC BALANCE/MONO DIST. ADJ.
FM L.P.F
FM IF
FM MIX
FM RF
RF AMP
FM OSC
AM OSC
COIL QUAD
SFR721 MPX VCO ADJ.
AM AMP
IC741 LA1265
SFR722 33K TUNING LED ADJ.
AM IF ADJ.
L742 PACFA2
R821 470 (E, K ONLY) 680 (Z ONLY)
R820 470 (E, K ONLY) 680 (Z ONLY)
TC801, TC802, TC803, L802, L804, L831 FM TRACKING ADJ.
J801 ANTENNA
FM 75Ω
FM LOOP (E, K ONLY)
AM LOOP (Z ONLY)
J902 ANTENNA AM LOOP (E, K ONLY)
L807 FM VT ADJ.
L941, TC942 LW TRACKING ADJ.
L941 ANT LW
L942 OSC MW
L982 ANT MW
L981 MW VT ADJ.
L982 MW TRACKING ADJ.
L942 LW VT ADJ.
AM PACK 4 TU101
J652 AUX IN
CON605 L CH G (A) R CH EMPH CD ON G (D) VM
TO C CD C.B CON7
IC601 XR-C5451 AP BBE
IC572 BU4052BF VOCAL FADER NORMAL SELECT
MODE SELECTOR
IC604 BU4052BF
SFR301, 302, 351, 352 PB SENS. ADJ.
PIN401
IC501 HA12134A DOLBY
IC571 NJM4558M
VOCAL FADER
IC201 T-BASS SELECT
IC202 LOW BOOST NJM4558M AF AMP
Q207, 208 T-BASS SWITCH
PHONES J250
J253 SURROUND
SPEAKERS
J254 SPEAKER TERMINAL SP-4P R
IC211 STK4142-MK2 AF POWER AMP METAL X4
Q107, 108 OVER ROAD DETECT
DECK 1
R CH
L CH
CON301
PIN301
IC301 NJM2068SD
P.B.AMP
IC351 NJM2068SD
N RELAY-1 C.B
DECK 2
CON351
PIN351
EH
O RELAY-2 C.B
TO B FRONT C.B
SFR451, 452 REC/PB FREQ. RESP. ADJ.
BIAS OSC
BEAT SW
IC401 NJM4558M REC AMP
SFR401, 402 REC/PB SENS. ADJ.
IC602, 603 CONTROL DATA SHIFT-REGISTER
MAIN STB
DATA
CLK
HOLD
CONST. VOLT. REG
POW SW
O-POWER
D AC C.B
PT101
E, Z: AC230V 50HZ
K: AC240V 50HZ
SIGNAL
FM
MW/LW

WIRING—3 (MAIN: E, K, Z)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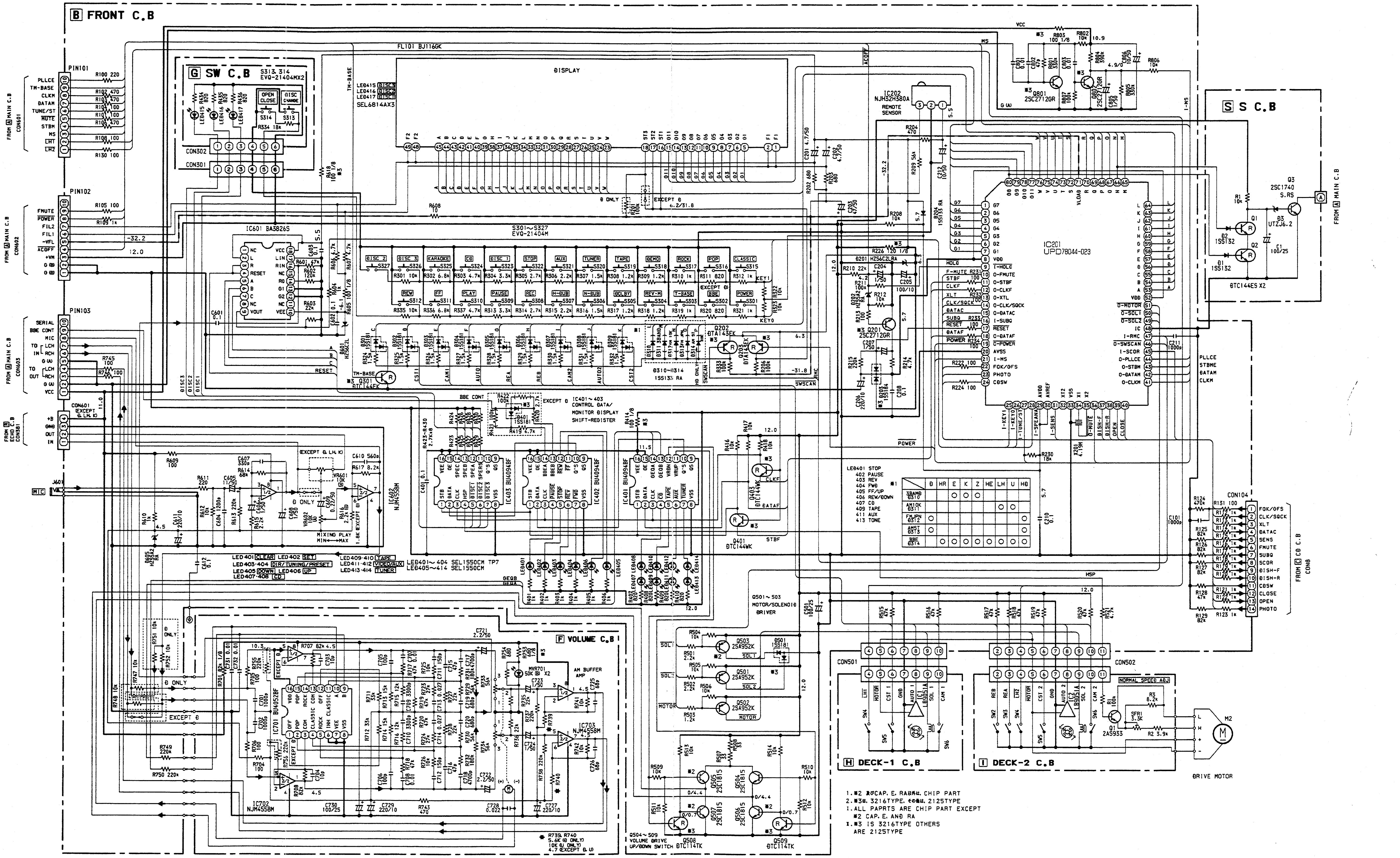
I
J
A MAIN C.B (E, K, Z MODELS)
J801
ANTENNA
E. K ONLY
Z ONLY
AM LOOP
FM LOOP
FM 75Ω
E. K ONLY J902
ANTENNA
AM LOOP
VR651
AUX INPUT LEVEL
J652
AUX
R
L
J253
SURROUND
J254
SPEAKER
⊕
⊖
J250
HEAD PHONE
PIN 2P
PIN101
FROM B FRONT C.B
PIN102
FROM B FRONT C.B
PIN103
FROM B FRONT C.B
CON601
CON602
CON603
D AC C.B
WH102
PT101
E, Z:AC230V 50HZ
K:AC240V 50HZ
W101
R100 R101
TO CON605
FROM C CD C.B
TO CON301
PIN301
FROM N RELAY-1 C.B
TO CON351
PIN351
FROM O RELAY-2 C.B

SCHEMATIC DIAGRAM—4 (FRONT)

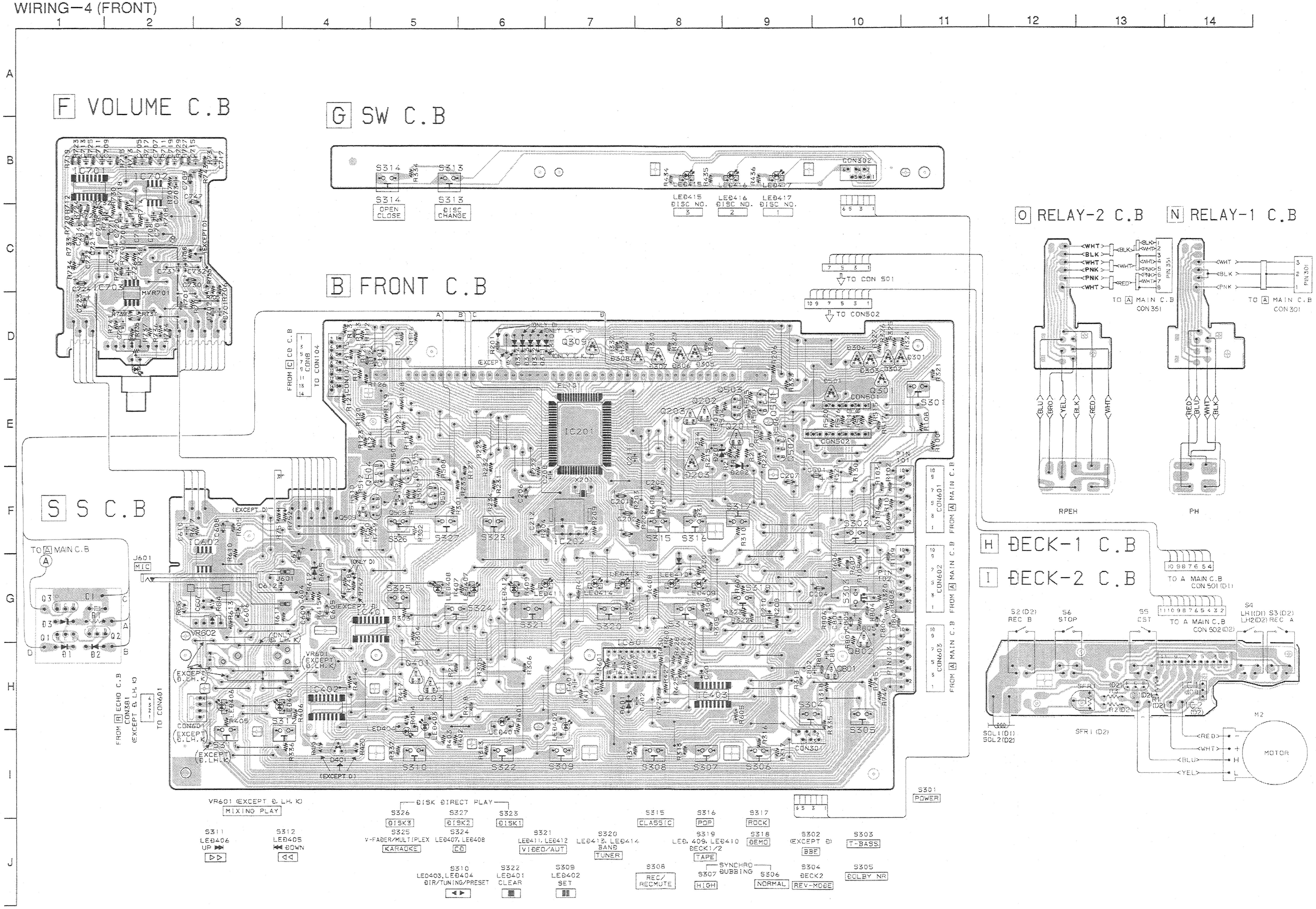

B FRONT C.B
G SW C.B
S S C.B
F VOLUME C.B
H DECK-1 C.B
I DECK-2 C.B
FL101 BJ116GK
DISPLAY
IC201 UPD78044-023
IC202 NJH52H580A REMOTE SENSOR
IC601 BA3826S
S301～S327 EVQ-21404M
S313, 314 EVQ-21404MX2
IC401 BU4094BF
IC402 BU4094BF
IC403 BU4094BF
IC401～403 CONTROL DATA/ MONITOR DISPLAY SHIFT-REGISTER
IC602 NJM4558M
IC701 BU4052BF
IC702 NJM4558M
IC703 NJM4558M
AM BUFFER AMP
Q501～503 MOTOR/SOLENOID DRIVER
Q504～509 VOLUME DRIVE UP/DOWN SWITCH DTC114TK
Q1 2SA933
Q3 2SC1740 S.RS
BTC144ES X2
CON601 CON602 CON603 CON104 CON501 CON502 CON301 CON302
PIN101 PIN102 PIN103
FROM A MAIN C.B
FROM C CD C.B CONB
FROM E ECHO C.B CON301
MIC
M2 DRIVE MOTOR
NORMAL SPEED ADJ
MIXING PLAY MIN←→MAX
LED401 CLEAR LED402 SET
LED403·404 DIR/TUNING/PRESET
LED405 DOWN LED406 UP
LED407·408 CD
LED409·410 TAPE
LED411·412 VIDEO/AUX
LED413·414 TUNER
LED401～404 SEL1550CM TP7
LED405～414 SEL1550CM
* R739, R740 5.6K (D ONLY) 10K (U ONLY) 4.7 (EXCEPT D, U)

LED401 STOP
402 PAUSE
403 REV
404 FWD
405 FF/UP
406 REW/DOWN
407 CD
409 TAPE
411 AUX
413 TONE

*1	D	HR	E	K	Z	HE	LH	U	HD
3BAND D310			○	○	○				
AM10K D311							○	○	
FMJPN D312	○								○
AMST D313	○								○
BBE D314		○	○	○	○	○	○	○	○

1. *2 及びCAP. E. RA以外は. CHIP PART
2. *3は. 3216TYPE. その他は. 2125TYPE
I. ALL PAPRTS ARE CHIP PART EXCEPT
*2 CAP. E. AND RA
I. *3 IS 3216TYPE OTHERS
ARE 2125TYPE

WIRING—4 (FRONT)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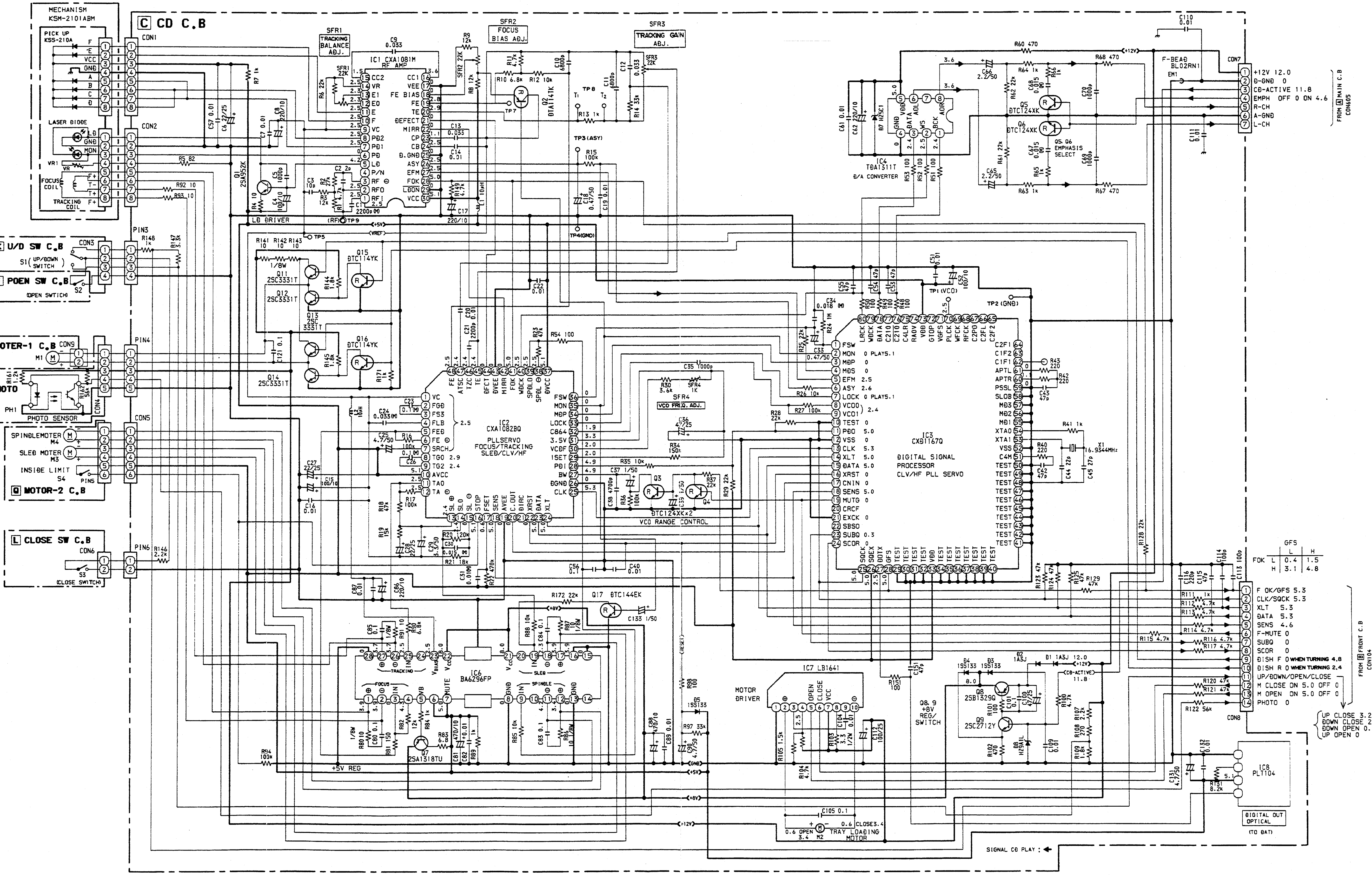
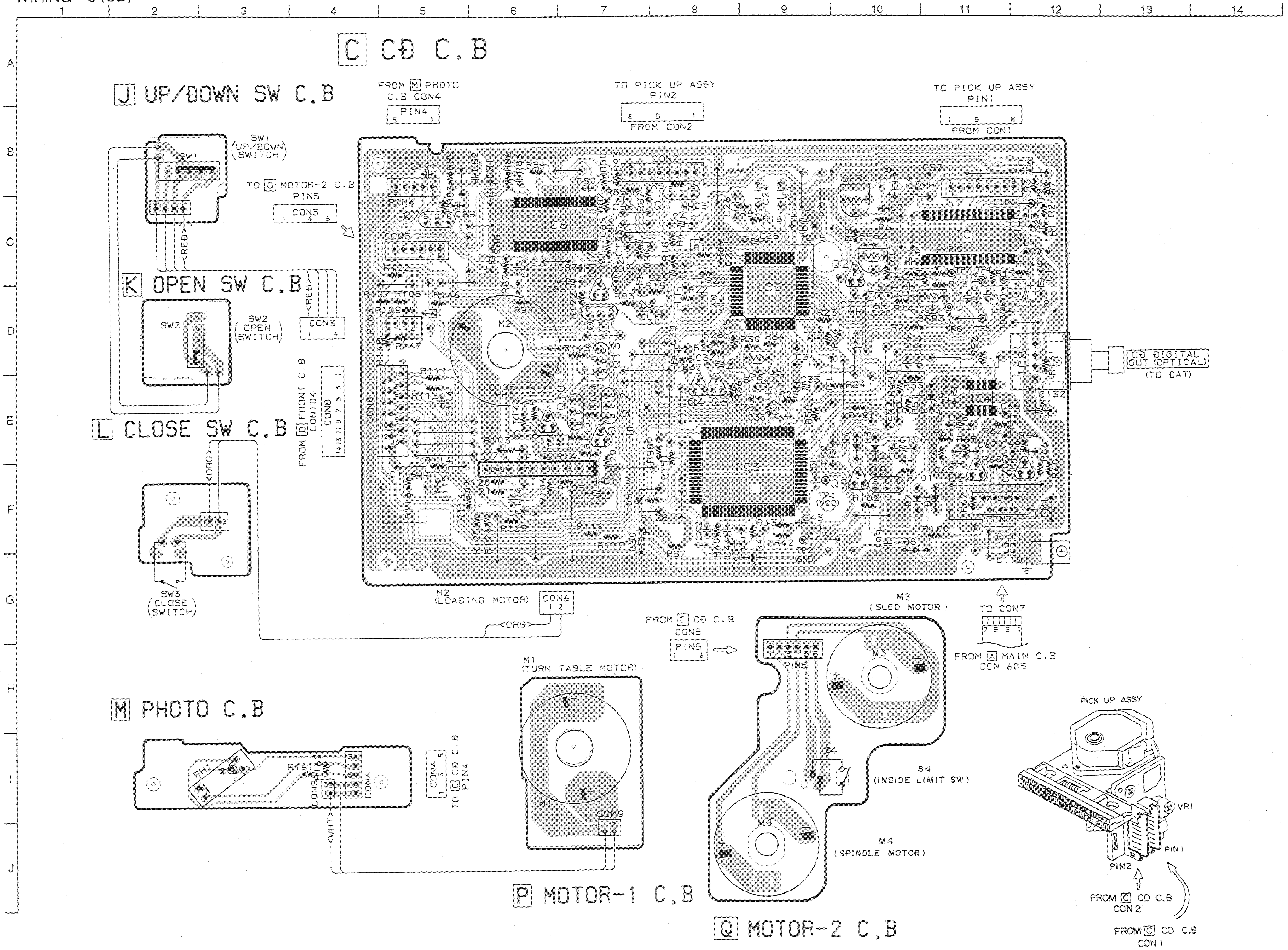
I
J
F VOLUME C.B
G SW C.B
B FRONT C.B
S S C.B
O RELAY-2 C.B
N RELAY-1 C.B
H DECK-1 C.B
I DECK-2 C.B
IC701
IC702
IC703
MVR701
IC201
IC202
IC401
IC402
IC403
IC601
IC602
X201
S314
OPEN CLOSE
S313
DISC CHANGE
LED415 DISC NO. 3
LED416 DISC NO. 2
LED417 DISC NO. 1
CON502
TO CON 501
TO CON502
FROM C CD C.B CON8
TO CON104
TO A MAIN C.B
J601 MIC
VR602
FROM R ECHO C.B CON381 (EXCEPT D, LH, K)
TO CON601
FROM A MAIN C.B CON601
FROM A MAIN C.B CON602
FROM A MAIN C.B CON603
TO A MAIN C.B CON351
TO A MAIN C.B CON301
PIN 351
PIN 301
RPEH
PH
TO A MAIN C.B CON 501 (D1)
TO A MAIN C.B CON 502 (D2)
S2 (D2) REC B
S6 STOP
S5 CST
S4 LH1(D1) LH2(D2)
S3 (D2) REC A
SFR1 (D2)
SOL1 (D1)
SOL2 (D2)
M2
MOTOR
RED
WHT
BLU
YEL
BLK
PNK
GRO
VR601 (EXCEPT D, LH, K)
MIXING PLAY
DISK DIRECT PLAY
S326
DISK3
S327
DISK2
S323
DISK1
S325
V-FADER/MULTIPLEX
KARAOKE
S324
LED407, LED408
CD
S321
LED411, LED412
VIDEO/AUT
S320
LED413, LED414
BAND
TUNER
S315
CLASSIC
S316
POP
S317
ROCK
S319
LED. 409, LED410
DECK1/2
TAPE
S318
DEMO
S302
(EXCEPT D)
BBE
S303
T-BASS
S301
POWER
S311
LED406
UP ▶▶
▷▷
S312
LED405
◀◀ DOWN
◁◁
S310
LED403, LED404
DIR/TUNING/PRESET
◀▶
S322
LED401
CLEAR
■
S309
LED402
SET
▮▮
S308
REC/ RECMUTE
SYNCHRO DUBBING
S307
HIGH
S306
NORMAL
S304
DECK2
REV-MODE
S305
DOLBY NR

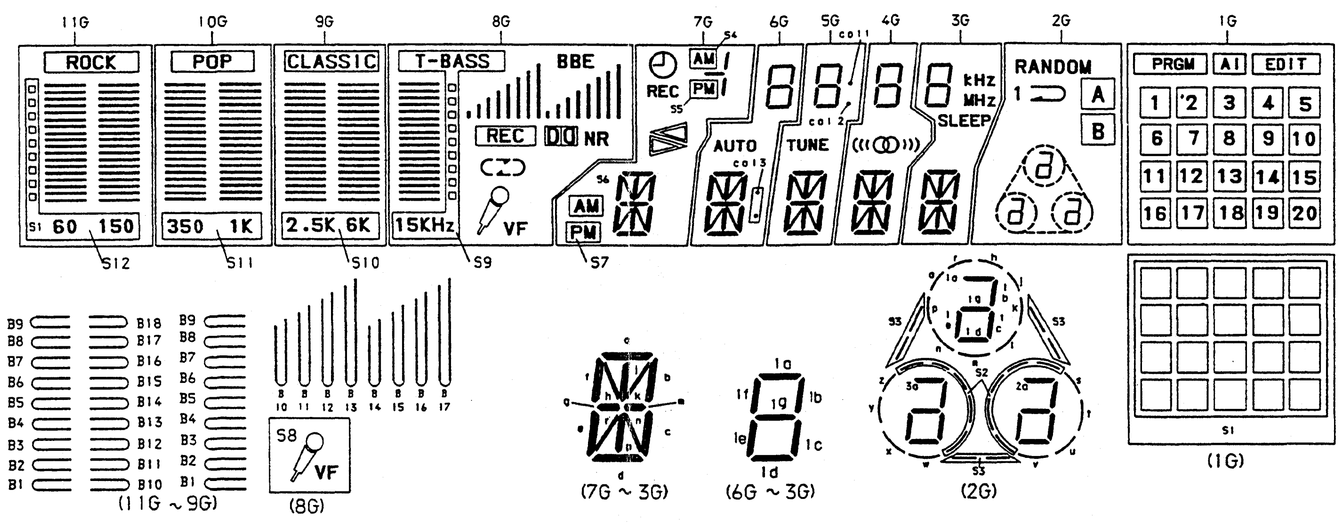
SCHEMATIC DIAGRAM—5 (CD)


MECHANISM KSM-2101ABM
PICK UP KSS-210A
C CD C.B
CON1
CON2
LASER DIODE
FOCUS COIL
TRACKING COIL
SFR1 TRACKING BALANCE ADJ.
SFR2 FOCUS BIAS ADJ.
SFR3 TRACKING GAIN ADJ.
IC1 CXA1081M RF AMP
LD DRIVER
TP1 (VCO)
TP2 (GND)
TP3 (ASY)
TP4 (GND)
TP5
TP7
TP8
TP9
K U/D SW C.B
S1 (UP/DOWN SWITCH)
J POEN SW C.B
(OPEN SWITCH) S2
P MOTER-1 C.B
M PHOTO C.B
PHOTO SENSOR
SPINDLE MOTER M4
SLED MOTER M3
INSIDE LIMIT S4
Q MOTOR-2 C.B
L CLOSE SW C.B
(CLOSE SWITCH) S3
IC2 CXA1082BQ PLL SERVO FOCUS/TRACKING SLED/CLV/HF
IC3 CXD1167Q DIGITAL SIGNAL PROCESSOR CLV/HF PLL SERVO
SFR4 VCO FREQ. ADJ.
VCO RANGE CONTROL
IC4 TDA1311T D/A CONVERTER
Q5, Q6 EMPHASIS SELECT
X1 16.9344MHz
F-BEAD BL02RN1
CON7
+12V 12.0
D-GND 0
CD-ACTIVE 11.8
EMPH OFF 0 ON 4.6
R-CH
A-GND
L-CH
FROM MAIN C.B CON605
GFS
FOK L 0.4 1.5
H 3.1 4.8
F OK/GFS 5.3
CLK/SQCK 5.3
XLT 5.3
DATA 5.3
SENS 4.6
F-MUTE 0
SUBQ 0
SCOR 0
DISH F 0 WHEN TURNING 4.8
DISH R 0 WHEN TURNING 2.4
UP/DOWN/OPEN/CLOSE
M CLOSE ON 5.0 OFF 0
M OPEN ON 5.0 OFF 0
PHOTO 0
CON8
FROM FRONT C.B CON104
UP CLOSE 3.2
DOWN CLOSE 2.0
DOWN OPEN 0.9
UP OPEN 0
IC6 BA6296FP
TRACKING
FOCUS
SPINDLE
SLED
+5V REG
Q17 DTC144EK
IC7 LB1641
MOTOR DRIVER
Q8, 9 +8V REG/ SWITCH
Q8 2SB1329Q
Q9 2SC2712Y
TRAY LOADING MOTOR M2
0.6 OPEN 3.4
0.6 CLOSE 3.4
IC8 PLT104
DIGITAL OUT OPTICAL (TO BAT)
SIGNAL CD PLAY
Q1 2SA952K
Q2 DTA114TK
Q3, Q4 DTC124XK×2
Q7 2SA1318TU
Q11 2SC5331T
Q12 2SC5331T
Q13 2SC5331T
Q14 2SC5331T
Q15 DTC114YK
Q16 DTC114YK
D5 1SS133
D6 H2SC1
D4 1SS133
D3 1SS133
D2 1A5J
D1 1A5J
D8 HZ9A1L

WIRING—5 (CD)


C CD C.B
J UP/DOWN SW C.B
SW1 (UP/DOWN SWITCH)
<RED>
K OPEN SW C.B
SW2 (OPEN SWITCH)
CON3
L CLOSE SW C.B
<ORG>
SW3 (CLOSE SWITCH)
FROM M PHOTO C.B CON4
PIN4
TO PICK UP ASSY PIN2
FROM CON2
TO PICK UP ASSY PIN1
FROM CON1
TO Q MOTOR-2 C.B PIN5
CON5
FROM B FRONT C.B CON104
CON8
IC1
IC2
IC3
IC4
IC6
IC7
IC8
M2
TP1 (VCO)
TP2 (GND)
CON7
CD DIGITAL OUT (OPTICAL) (TO DAT)
M2 (LOADING MOTOR)
CON6
TO CON7
FROM A MAIN C.B CON 605
FROM C CD C.B CON5
PIN5
M3 (SLED MOTOR)
M1 (TURN TABLE MOTOR)
M PHOTO C.B
PH1
R161
CON9
CON4
TO C CD C.B PIN4
<WHT>
P MOTOR-1 C.B
M1
CON9
Q MOTOR-2 C.B
M3
S4
S4 (INSIDE LIMIT SW)
M4
M4 (SPINDLE MOTOR)
PICK UP ASSY
VR1
PIN1
PIN2
FROM C CD C.B CON 2
FROM C CD C.B CON 1

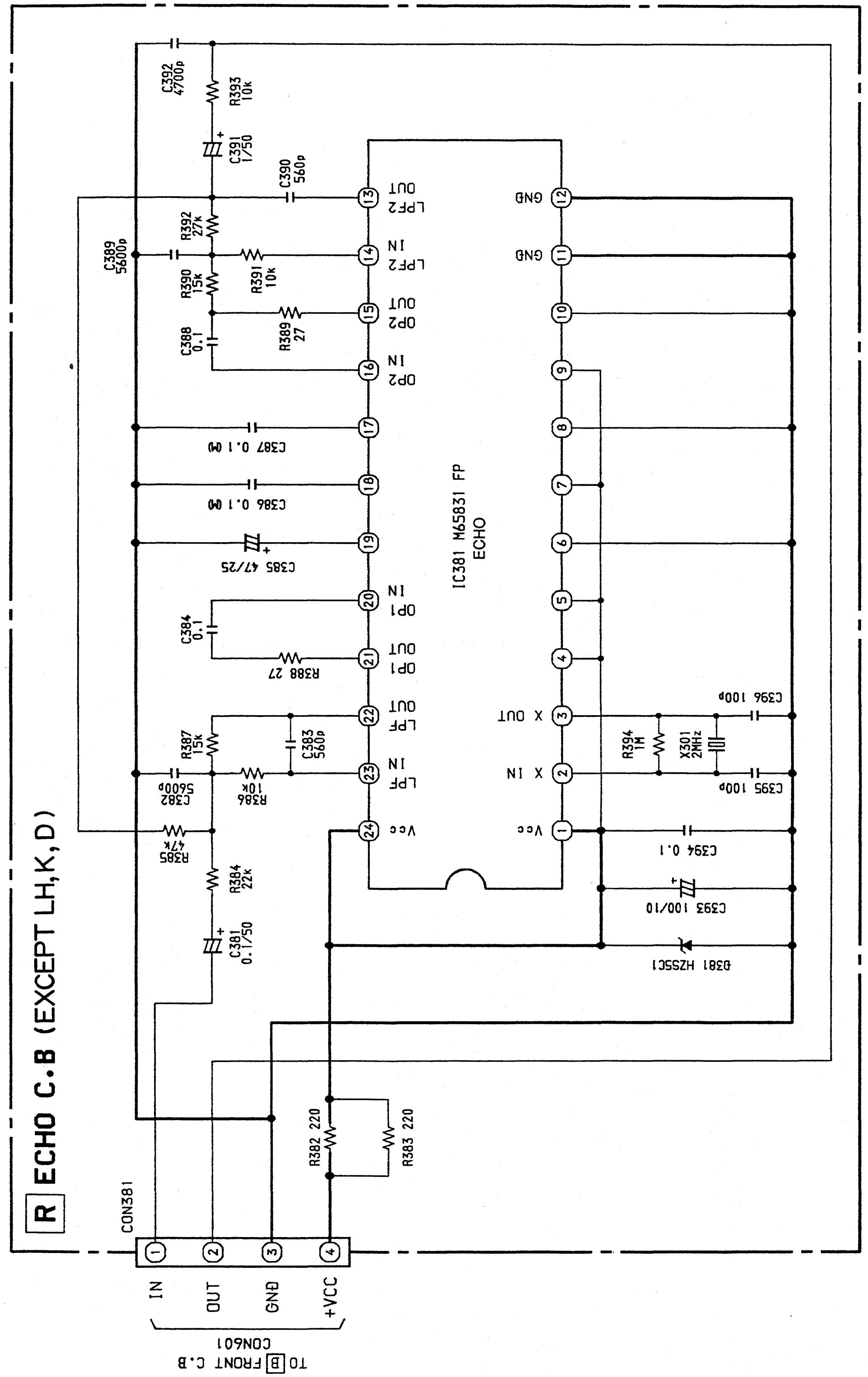
FL GRID ASSIGNMENT／ANODE CONNECTION


11G
10G
9G
8G
7G
6G
5G
4G
3G
2G
1G
ROCK
POP
CLASSIC
T-BASS
BBE
REC
DD NR
AM
PM
AUTO
TUNE
kHz
MHz
SLEEP
RANDOM
A
B
PRGM
AI
EDIT
S1 60 150
350 1K
2.5K 6K
15KHz
VF
S12
S11
S10
S9
S7
S8
(11G ~ 9G)
(8G)
(7G ~ 3G)
(6G ~ 3G)
(2G)
(1G)

ANODE CONNECTION (BJ116GK)

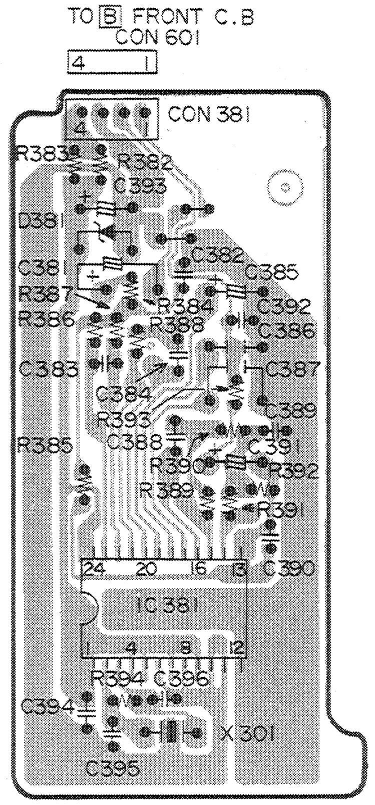
	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	B10	B10	B10	(	d	d	d	d	d	s, t w, x	**20**
P2	B1	B1	B1	B1	j, p	j, p	j, p	j, p	j p	u, v y, z	**19**
P3	B11	B11	B11	S8	n	n	n	n	n	3 e	**18**
P4	B2	B2	B2	B2	r	r	r	r	r	3 c	**17**
P5	B12	B12	B12	)	c	c	c	c	c	3a,3d,3g	**16**
P6	B3	B3	B3	B3	e	e	e	e	e	3b	**15**
P7	B13	B13	B13	o	m	m	m	m	m	2e	**14**
P8	B4	B4	B4	B4	g	g	g	g	g	2c	**13**
P9	B5	B5	B5	B5	f	f	f	f	f	2a,2d,2g	**11**
P10	B15	B15	B15	**DD NR**	b	b	b	b	b	S3	**10**
P11	B6	B6	B6	B6	K	k	k	k	k	j, m, q	**9**
P12	B16	B16	B16	B10	h	h	h	h	h	h, l, p	**8**
P13	B7	B7	B7	B7	a	a	a	a	a	k, n, r	**7**
P14	B14	B14	B14	**REC**	S 7	col 3	col 1	–	**KHz**	2 b	**12**
P15	B17	B17	B17	B11	S 6	**AUTO**	**TUNE**	(((◎)))	**SLEEP**	1 e	**6**
P16	B8	B8	B8	B8	▷	–	col 2	–	**MHz**	1a,1d,1g	**5**
P17	B18	B18	B18	B12	◁	1d	1d	1d	1d	1c	**4**
P18	B9	B9	B9	B9	**REC**	1e	1e	1e	1e	1b	**3**
P19	▭	▭	▭	13B	S5	1c	1c	1c	1c	**B**	**2**
P20	–	–	–	B14	—	1g	1g	1g	1g	**1**	**1**
P21	–	–	–	B15	/	1f	1f	1f	1f	↩	**EDIT**
P22	–	–	–	B16	◷	1b	1b	1b	1b	**A**	**AI**
P23	–	–	–	B17	S4	1a	1a	1a	1a	**RANDOM**	**PRGM**
P24	S12	S11	S10	S9 ⧗	–	–	–	–	–	S2	S1
P25	**ROCK**	**POP**	**CLASSIC**	–	–	–	–	–	–	–	–
P26	–	–	–	**BBE**	–	–	–	–	–	–	–

SCHEMATIC DIAGRAM—6 (ECHO)

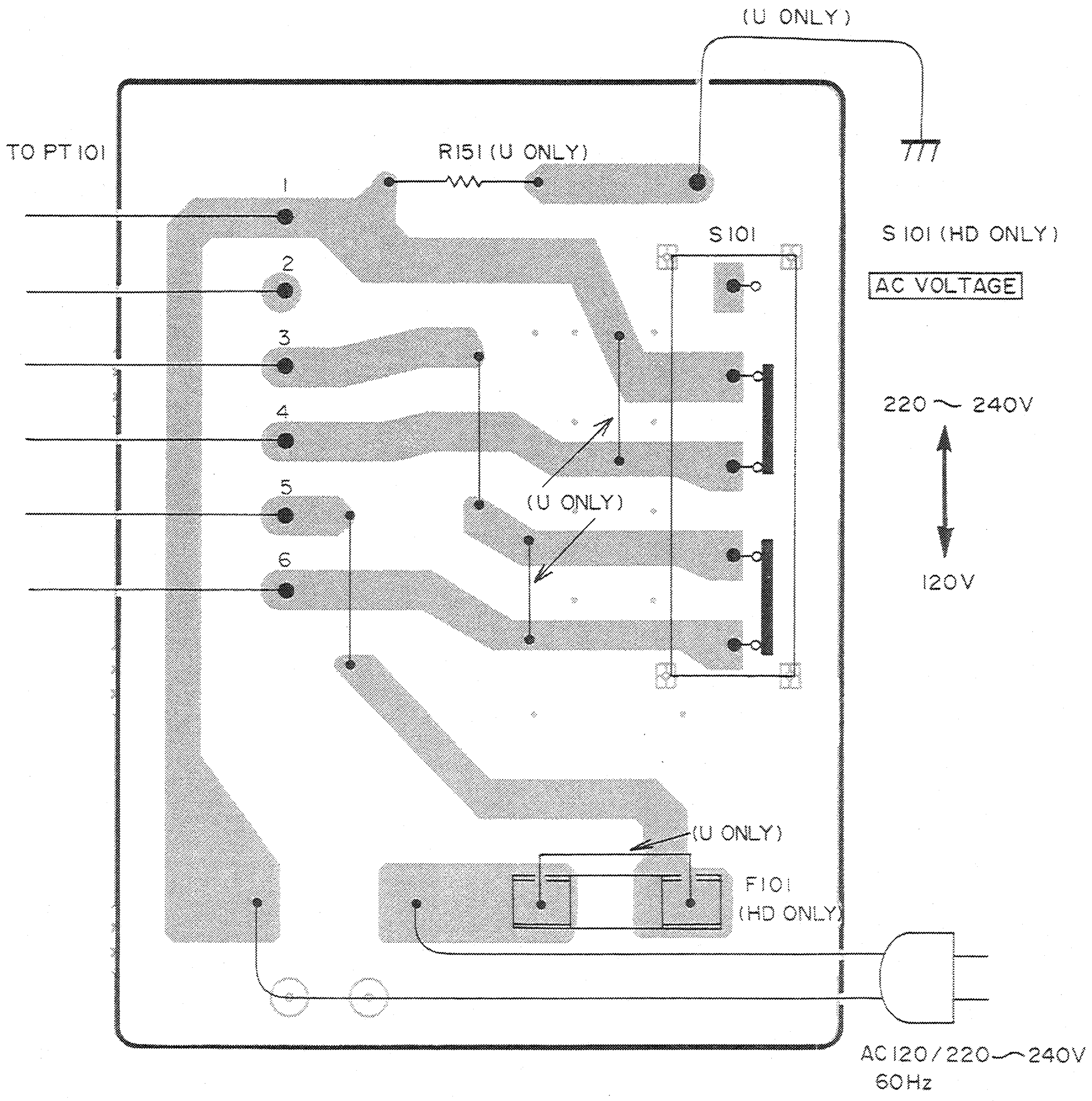

R ECHO C.B (EXCEPT LH,K,D)
IC381 M65831 FP ECHO
C392 4700p
R393 10k
C391 1/50
C390 560p
R392 27k
C389 5600p
R390 15k
R391 10k
C388 0.1
R389 27
C387 0.1(M)
C386 0.1(M)
C385 47/25
C384 0.1
R388 27
R387 15k
C383 560p
C382 5600p
R386 10k
R385 47k
R384 22k
C381 0.1/50
R394 1M
X301 2MHz
C396 100p
C395 100p
C394 0.1
C393 100/10
D381 HZ5C1
R382 220
R383 220
LPF2 OUT
LPF2 IN
OP2 OUT
OP2 IN
OP1 IN
OP1 OUT
LPF OUT
LPF IN
Vcc
GND
X OUT
X IN
CON381
IN
OUT
GND
+VCC
CON601
TO B FRONT C.B

WIRING—6 (ECHO)

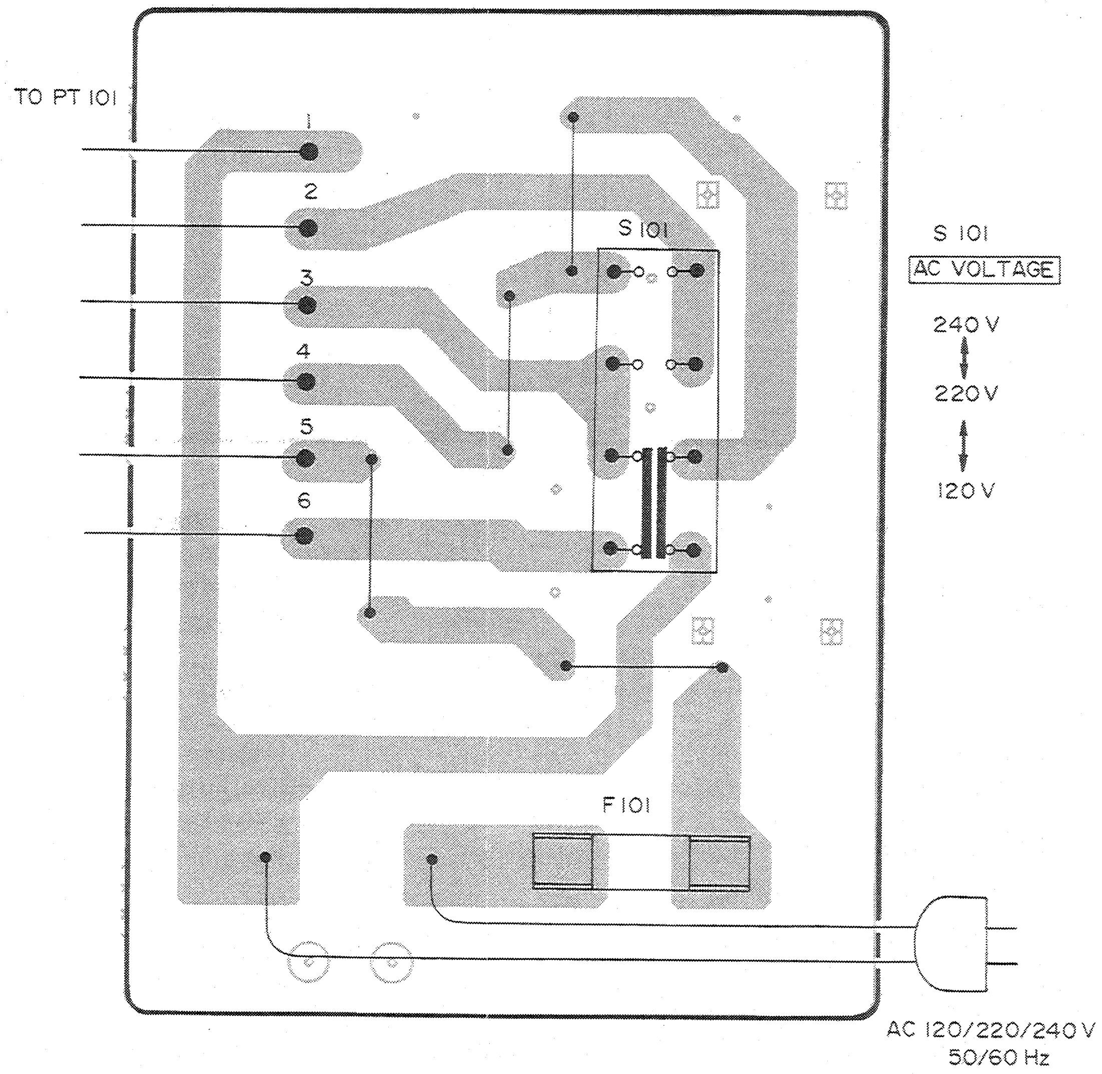
R ECHO C.B (HE,HR,HD,U,E,Z)


TO B FRONT C.B
CON 601
4
1
CON 381
4
R383
R382
C393
D381
C381
C382
C385
R387
R384
C392
R386
R388
C386
C383
C387
C384
C389
R393
C388
C391
R385
R390
R392
R389
R391
24
20
16
13
C390
IC381
1
4
8
12
R394
C396
C394
X301
C395

E AC VOLTAGE C.B (U,HD)


(U ONLY)
TO PT 101
R151 (U ONLY)
1
2
3
4
5
6
S101
S101 (HD ONLY)
AC VOLTAGE
220 ~ 240V
120V
(U ONLY)
(U ONLY)
F101
(HD ONLY)
AC120/220~240V
60Hz

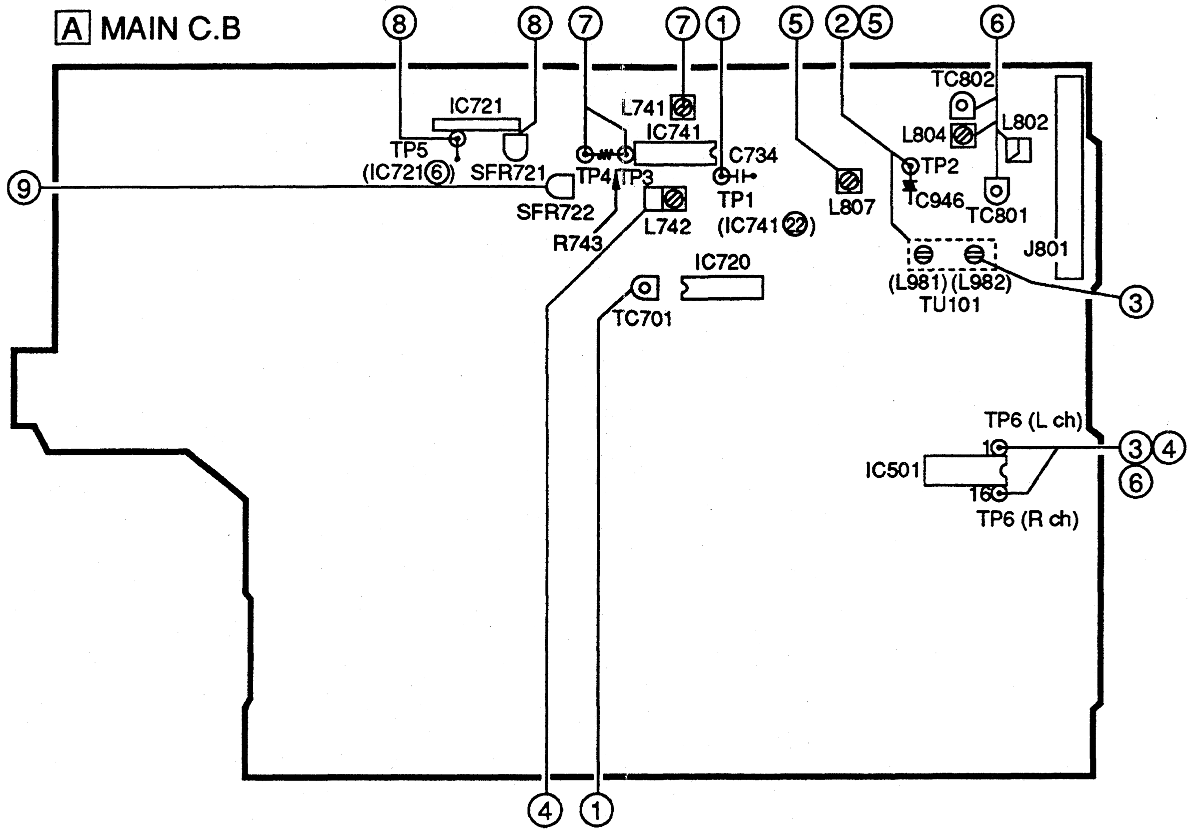
E AC VOLTAGE C.B (HE,LH,HR)


TO PT 101
1
2
3
4
5
6
S101
S101
AC VOLTAGE
240V
220V
120V
F101
AC 120/220/240V
50/60 Hz

ELECTRICAL ADJUSTMENT
ADJUSTMENT−1＜TUNER＞

(D, HD Models)

A MAIN C.B


⑧
⑧
⑦
⑦
①
⑤
②⑤
⑥
⑨
IC721
TP5
(IC721⑥)
SFR721
SFR722
L741
IC741
TP4
TP3
C734
TP1
(IC741㉒)
R743
L742
L807
TC802
L804
L802
TP2
TC946
TC801
J801
IC720
TC701
(L981)
(L982)
TU101
③
TP6 (L ch)
1
IC501
16
TP6 (R ch)
③④
⑥
④
①

1. クロック周波数調整

条件：・テストポイント：TP1
　　　・調整箇所：TC701 (HD ONLY)
方法：HD ：AM 1602kHzに設定し、テストポイントTP1の周波数が2052±0.01kHzになる様に調整する。
　　　D　：AM 1602kHzでTP1の周波数が2052±0.04kHzとなることを確認する。

2. AM VT 確認

条件：・テストポイント：TP2
方法：AM 1602kHzに設定し、テストポイントTP2の電圧が7.0±1.0Vになる事を確認する。

3. AMトラッキング調整

条件：・テストポイント：TP6
　　　・調整箇所：TU101 (L982)
方法：AM999kHzに設定し、感度が53±6dBになる様に調整する。

4. AM IF 調整

条件：・テストポイント：TP6
　　　L742 ································· 450kHz

5. FM VT 調整

条件：・テストポイント：TP2
　　　・調整箇所：L807
方法：FM 76.0MHzに設定し、テストポイントTP2の電圧が1.0V±0.05Vになる様に調整する。

6. FM トラッキング調整

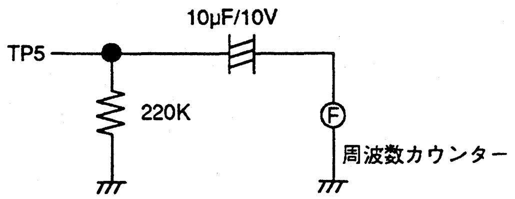
条件：・テストポイント：TP6
　　　(TC801及びTC802) ······················ 108.0MHz
　　　(L802及びL804) ························· 76.0MHz

7. DCバランス調整

条件：・テストポイント：TP3及びTP4
　　　・調整箇所：L741
方法：FM 83.0MHzに設定し、テストポイントTP3、TP4間の電圧が0±0.02Vになる様にL741を調整する。調整後、歪率が0.9%以下である事を確認する。

8. MPX VCO 調整

条件：・テストポイント：TP5
　　　・調整箇所：SFR721
方法：コンデンサーと抵抗を下図の様に接続する。非変調のFM 83.0MHzに設定し、テストポイントTP5の周波数が38±0.05kHzになる様にSFR721を調整する。


10μF/10V
TP5
220K
F
周波数カウンター

9. チューニングLED 点灯調整

条件：・入力レベル：18dB
　　　・調整箇所：SFR722
方法：FM 83.0MHzに設定し、チューニングLEDが点灯する様にSFR722を調整する。その後、入力レベルが2dB下がるとLEDは消灯する。

PRACTICAL SERVICE FIGURE

＜FM部＞

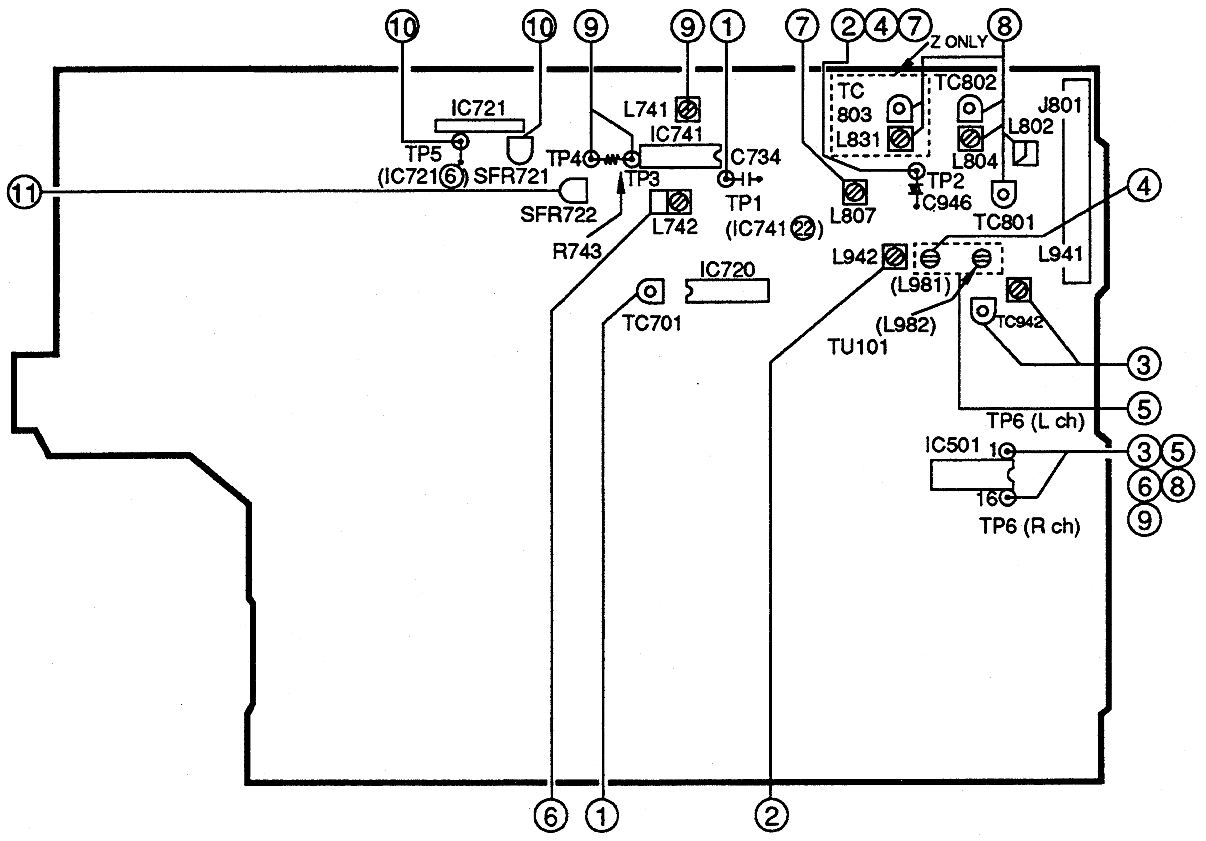
IHF 感度：	6±4dB (76MHz時)
(THD 3%)	4±4dB (83/90/108MHz時)
50dB雑音制限感度：	32±5dB (76/83/108MHz時)
S/N比：	STEREO 64dB以上 (83MHz時)
歪率：	MONO 0.9%以下 (83MHz時)
	STEREO 1.2%以下 (83MHz時)
セパレーション：	25dB以上 (83MHz時)
中間周波数：	10.7MHz

＜AM部＞

実用感度：	54$\pm^{8}_{6}$dB (603kHz時)
(S/N 20dB)	53±6dB (999kHz時)
	53±6dB (1404kHz時)
歪率：	1.5%以下 (999kHz時)
セパレーション：	20dB (999kHz時)
中間周波数：	450Hz

ADJUSTMENT—1 <TUNER>

(HE, LH, HR, U, E, K, Z Models)



1. Clock Frequency Adjustment

Settings: · Test point : TP1 (CLK)
· Adjustment location : TC701

Method: Set to AM 1602kHz (HE, LH, HR, E, K, Z), 1710kHz (U) and adjust so that the test point becomes 2052kHz±0.01kHz (HE, LH, HR, E, K, Z), 2160kHz±0.01kHz (U).

2. LW VT Adjustment (E, K, Z)

Settings: · Test point : TP2 (VT)
· Adjustment location : L942

Method: Set to LW 144kHz and adjust so that the test point becomes 1.5V±0.05V.

3. LW Tracking Adjustment (E, K, Z)

Setting: · Test point : TP6
L941 ························ 144kHz
TC942 ······················ 290kHz

4. AM (MW) VT Check

Settings: · Test point : TP2 (VT)
· Adjustment location : TU101 (L981)

Method: Set to AM 1602kHz (HE, LH, HR, E, K, Z), 1710kHz (U) and adjust so that the test point becomes 6.0V±1.0V (HE, LH, HR, E, K, Z), 7.0V±1.0V (U).

5. AM (MW) Tracking Check

Settings: · Test point : TP6
· Adjustment location : TU101 (L982)

Method: Set to AM 999kHz (HE, LH, HR, E, K, Z), 1000KHz (U) and adjust so that the test point becomes 53V±6dB.

6. AM IF Adjustment

Settings: · Test point : TP6
L742 ························ 450kHz

7 FM VT Adjustment

Settings: · Test point : TP2 (VT)
· Adjustment location : L807

Method: Set to FM 87.5MHz and adjust L807 so that the test point becomes 2.9V±0.05V.

8. FM Tracking Adjustment

Settings: · Test point : TP6
TC801, TC802 ·········· 108MHz (Except Z)
TC801, TC802, TC803 ·········· 108MHz (Z)
L802, L804 ············ 87.5MHz (Except Z)
L802, L804, L831 ············ 87.5MHz (Z)

9. DC Balance/MONO Distortion Adjustment

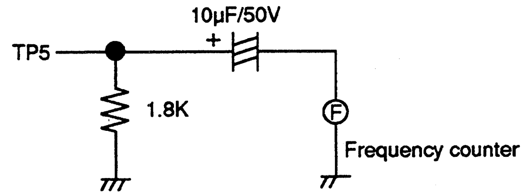
Settings: · Test point : TP3, TP4 (DC balance)
TP6 (Distortion)
· Adjustment location : L741
· Input level : 54dB

Method: Set to FM 98.0MHz and adjust L741 so that the voltage between TP3 and TP4 becomes 0V±0.02V.
Next, adjust L741 so that the distortion becomes minimum (less than 0.9%).

10. MPX VCO Adjustment

Settings: · Test point : TP5
· MODE SW : STEREO
· Adjustment location : SFR721
· Input level : 54dB

Method: Connect a capacitor and a resitor as below. Set to FM 98.0MHz and adjust so that the frequency at test point becomes 38kHz±0.05kHz.



11. Light on Tuning LED Adjustment

Settings: · Adjustment location : SFR722
· Input level : 16dB

Method: Set to FM 98.0MHz and adjust TUNING LED to light on by SFR722. After that, LED goes out by 16±2dB down.

PRACTICAL SERVICE FIGURE

<TUNER SECTION>

<FM SECTION>

IHF Sensitivity: (THD 3%)	2±6dB (Except Z) (at 87.5, 98.0, 108.0MHz) 7±6dB (Z) (at 87.5, 98.0, 108.0MHz)
S/N 50dB Quieting Sensitivity: (Except Z)	32±5dB (at 87.5, 98.0, 108.0MHz)
S/N 46dB Quieting Sensitivity: (Z)	37±6dB (at 87.5, 98.0, 108.0MHz)
Signal to Noise Ratio:	More than 64dB (Except Z) (at 98.0MHz) More than 60dB (Z) (at 98.0MHz)
Dstortion:	Less than 1.2% (at 98.0MHz)
Stereo Separation:	More than 25dB (at 98.0MHz)
Intermediate Frequency:	10.7MHz

<AM (MW) SECTION>

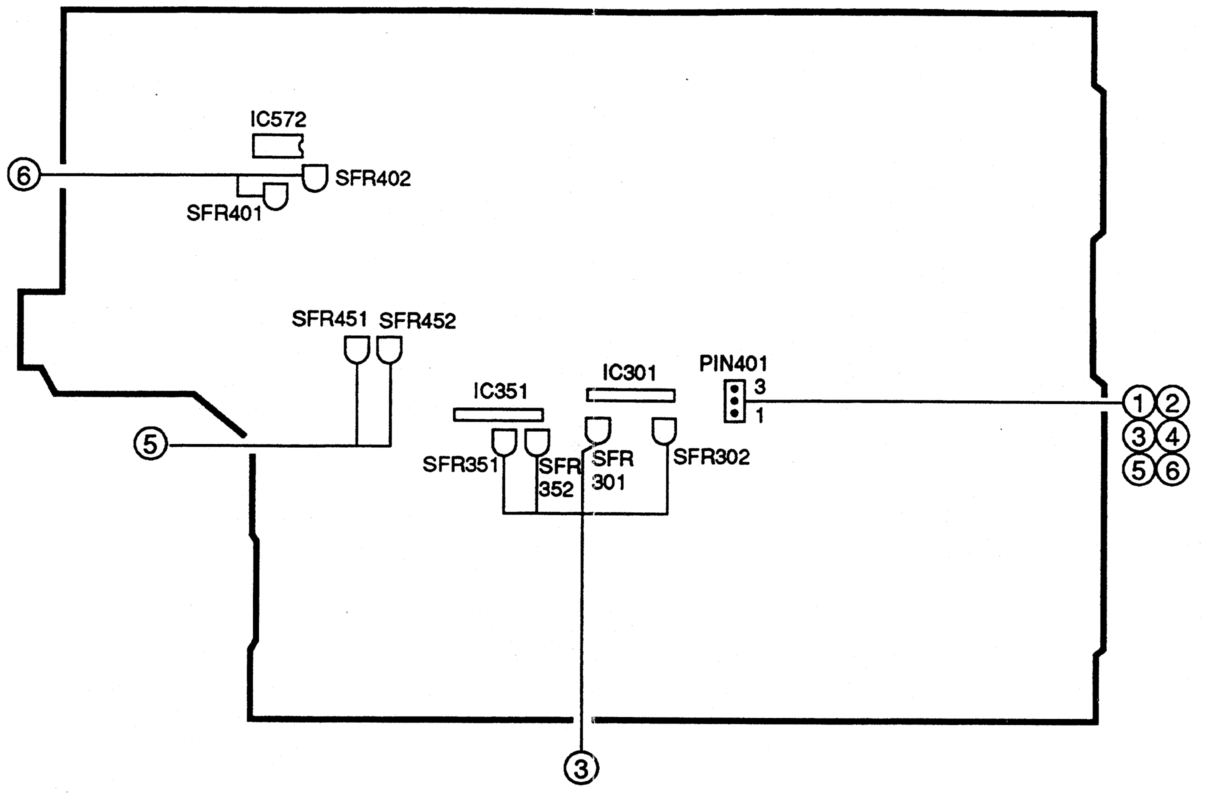
Sensitivity:	$54\pm^{8}_{6}$dB [at 603kHz (HE, HR, E, K, Z)] [at 600kHz (LH, U)] 53±6dB [at 999/1404kHz (HE, HR, E, K, Z)] [at 1000/1400kHz (LH, U)]
Distortion:	Less than 1.5% [at 999kHz (HE, HR, E, K, Z)] [at 1000kHz (LH, U)]
Intermediate Frequency:	450kHz

<LW SECTION> (E, K, Z)

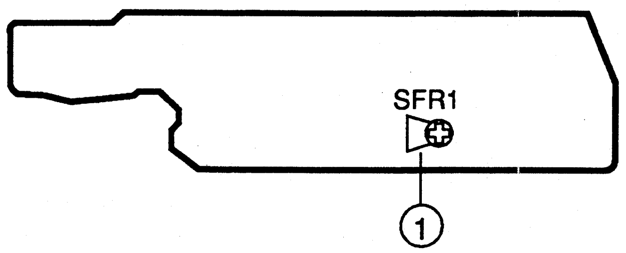
Sensitivity: (S/N 20dB)	66±5dB (at 144kHz) 63±5dB (at 198kHz) 62±5dB (at 290kHz)
Signal to Noise Ratio:	More than 32dB (at 198kHz)
Distortion:	Less than 1.5% (at 198kHz)
Intermediate Frequency:	450kHz

ADJUSTMENT−2<DECK>

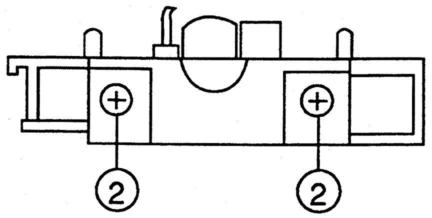
A MAIN C.B



I DECK—2 C.B



DECK 1P, DECK 2 R/P/E HEAD



1. 定速スピード調整 (DECK2)

条件：・テストテープ：TTA−100
・テストポイント：PIN401
・調整箇所：SFR1 (DECK2)

方法：テストテープを再生し、再生周波数が3000±5Hzになる様にSFR1 (DECK2) を調整する。
REV時はFWDに対して±45Hzである事を確認する。

2. アジマス調整 (DECK1及びDECK2)

条件：・テストテープ：TTA−310
・テストポイント：PIN401
・調整箇所：アジマス調整ネジ

方法：テストテープの10kHzを再生し、出力が最大ポイントより-0.5dBになる様に調整する。PLAY及びREV PLAYの各モードにて調整する。

3. 再生レベル調整 (DECK1及びDECK2)

条件：・テストテープ：TTA−200
・テストポイント：PIN401
・調整箇所：SFR301 (DECK1 Lch)
SFR302 (DECK1 Rch)
SFR351 (DECK2 Lch)
SFR352 (DECK2 Rch)

方法：テストテープを再生し、出力が300mVになる様に調整する。

4. 再生周波数特性確認 (DECK1及びDECK2)

条件：・テストテープ：TTA−310
・テストポイント：PIN401

方法：テストテープの315Hzと10kHzを再生し、10kHzの出力が315Hzの出力に対して0±2.0dBである事を確認する。

5. 録再周波数特性調整 (DECK2)

条件：・テストテープ：TTA−601
・テストポイント：PIN401
・調整箇所：SFR451 (Lch)
SFR452 (Rch)

方法：テストポイントにて21.0mVになる様に、ATTを調整する。テストテープの1kHzと10kHzを録再し、10kHzの出力が1kHzの出力に対して0dB±0.5dBになる様に調整する。

6. 録再感度調整 (DECK2)

条件：・テストテープ：TTA−601
・テストポイント：PIN401
・調整箇所：SFR401 (Lch)
SFR402 (Rch)

方法：テストポイントにて21.0mVになる様に、ATTを調整する。テストテープの1kHzを録再し、出力が21.0mV±0.5dBになる様に調整する。

PRACTICAL SERVICE FIGURE

<DECK>

再生出力：	2.8V±1.5dB (SP OUT)
録再出力：	2V±2dB (SP OUT)
録再歪率：	2.0%以下 (NORM/CrO_2)
消去率：	60dB以上
クロストーク：	60dB以上
チャンネルセパレーション：	50dB以上
録再ノイズ：	35mV/16mV以下 (DOLBY OFF/ON NORM, SP OUT) 23mV/13mV以下 (DOLBY OFF/ON CrO_2, SP OUT)
再生ノイズ：	200mV/130mV以下 (DOLBY OFF/ON NORM, VR MAX) 150mV/100mV以下 (DOLBY OFF/ON CrO_2, VR MAX)
録音バイアス周波数：	108kHz
テープスピード：	3kHz±45Hz
ワウ・フラッター：	0.25%以下 (W. RMS) (DECK1/2)
巻き取りトルク：	30〜55g-cm (DECK1/2)
早送りトルク：	75〜140g-cm (DECK1/2)
巻き戻しトルク：	75〜140g-cm (DECK1/2)
バックテンション：	2〜6g-cm (DECK1/2)
テストテープ：	NORMAL TTA-601 CrO_2 TTA−610

1. Normal Speed Adjustment (DECK-2)

Settings: · Test tape : TTA-100
· Test point : TP-OUT (PIN401)
· Adjustment location : SFR1 (DECK-2)

Method: Play back the test tape, on FWD PLAY SFR1 (DECK-2) adjust for 3000Hz±5Hz, and to±45Hz of the FWD value during the REV mode.

2. Head Azimuth Adjustment (DECK-1, DECK-2)

Settings: · Test tape : TTA-310
· Test point : TP-OUT (PIN401)
· Adjustment location : Head zaimuth adjustment screw

Method: Play back the 10kHz signal of the test tape and adjust so that the output becomes maximum. Next, perform on each FWD PLAY and REV PLAY mode.

3. PB Sensitivity Adjustment (DECK-1, DECK-2)

Settings: · Test tape : TTA-200 (TCC-130, TTA-161)
· Test point : TP-OUT (PIN401)
· Adjustment location :
SFR301 (DECK-1, Lch)
SFR302 (DECK-1, Rch)
SFR351 (DECK-2, Lch)
SFR352 (DECK-2, Rch)

Method: Play back the test tape and adjust so that the output becomes 300mV.

4. PB Frequency Response Check (DECK-1, DECK-2)

Settings: · Test tape : TTA-310
· Test point : TP-OUT (PIN401)

Method: Play back the 315Hz and 10kHz signals of the test tape and check the output of the 10kHz signal is 0dB±2dB with respect to that of the 315Hz signal.

5. REC /PB Frequency Response Adjustment (DECK-2)

Settings: · Test tape : TTA-601
· Test point : TP-OUT (PIN401)
· Adjustment location : SFR451 (Lch)
SFR452 (R ch)

Method: Apply a 1kHz signal and adjust attenuator so that the level at the TP-OUT is 21.0mV.
Record and play back the 1kHz and 10kHz signals and adjust so that the output level of 10kHz signal is 0dB ± 0.5dB for 1kHz signal.

6. REC /PB Sensitivity Adjustment (DECK-2)

Settings: · Test tape : TTA-601
· Test point : TP-OUT (PIN401)
· Adjustment location : SFR401 (Lch)
SFR402 (R ch)

Method: Apply a 1kHz signal and adjust attenuator so that the level at the TP-OUT is 21.0mV.
Record and play back the 1kHz signal and 10kHz signals and adjust so that the output level is 21.0mV±0.5dB.

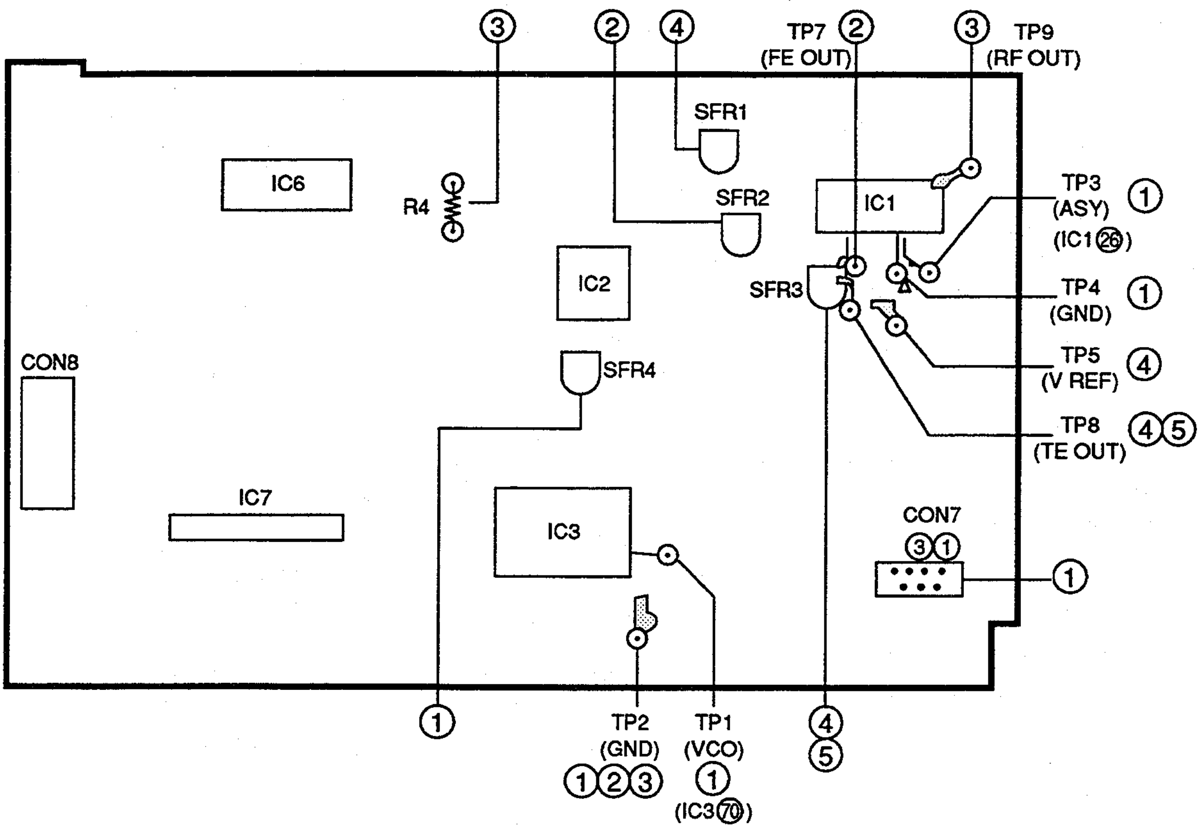
PRACTICAL SERVICE FIGURE

<DECK SECTION>

PB Output Level:	2.8V±1.5dB (SP OUT)
REC/PB Output Level:	2V±2dB (SP OUT)
Distortion (REC/PB):	Less than 2.0% (NORM, CrO_2)
Noise (PB):	Less than 100mV/150mV (DOLBY NR ON/OFF CrO_2, VR MAX.) Less than 130mV/200mV (DOLBY NR ON/OFF NORM, VR MAX.)
Noise (REC/PB):	Less than 35mV/16mV (DOLBY ON/OFF NORM, SP OUT) Less than 23mV/13mV (DOLBY ON/OFF CrO_2, SP OUT)
Erasing Ratio:	More than 60dB (TTA-601) (at 125Hz)
Cross talk:	More than 60dB
Channel Separation:	More than 50dB
Recording Bias Frequency:	85kHz
Tape speed:	3kHz±1.5%
Wow & Flutter:	Less than 0.25% (DECK-1/2) TTA-100 (TTA-111S)
Take-up Torque:	30~55g-cm (DECK-1/2)
F.F & REW Torque:	75~140g-cm (DECK-1/2)
Back Tension:	2~6g-cm (DECK-1/2)
Test Tape:	NORMAL :TTA-601 CrO_2 :TTA-610

ADJUSTMENT－3 <CD>

C CD C.B


③
②
④
TP7 (FE OUT) ②
③ TP9 (RF OUT)
SFR1
IC6
R4
SFR2
IC1
TP3 (ASY) ① (IC1㉖)
IC2
SFR3
TP4 (GND) ①
CON8
SFR4
TP5 (V REF) ④
TP8 (TE OUT) ④⑤
IC7
CON7 ③①
IC3
①
①
TP2 (GND) ①②③
TP1 (VCO) ① (IC3(70))
④ ⑤

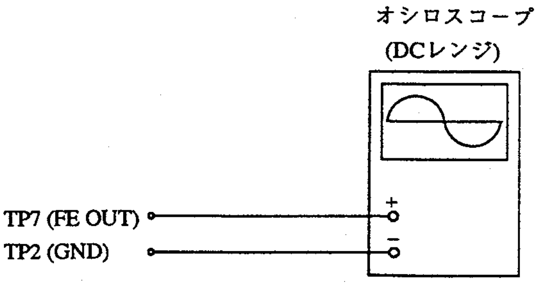
注意：周波数カウンター又はオシロスコープのプローブ(10:1)をテストポイントに接続する。

1. VCO周波数調整

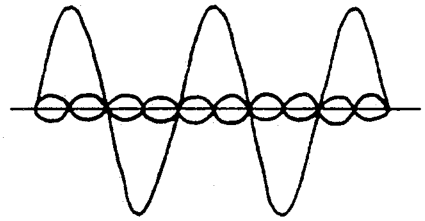
1. CON7の①と③をワイヤーでショートする.
2. TP3 (ASY) とTP4 (GND) を接続し、ショートする。
3. 周波数カウンターをテストポイントTP1 (VCO) とTP2 (GND) に接続する。
4. 周波数カウンターの値が4.27±0.02MHzになる様にSFR4 (VCO) を調整する。
5. 調整後、TP2 (GND), TP3 (ASY) 及びTP4からショートクリップを外す。

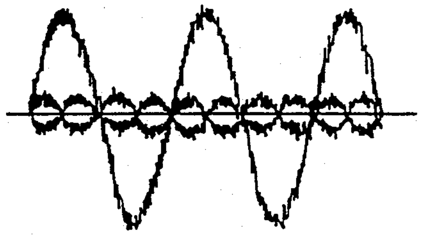
2. フォーカスバイアス調整

光学ブロックの変換時又は修理時には、必ずフォーカスバイアスを調整する。


オシロスコープ
(DCレンジ)
TP7 (FE OUT)
TP2 (GND)
+
−

1. オシロスコープをテストポイントTP7 (FE OUT) とTP2 (GND) に接続する。
2. 電源スイッチをONにする。
3. テストディスクTCD-782 (YEDS-18) を入れ、2曲目を再生する。
4. テストポイントTP7 (FE OUT) のノイズ (高周波) が最小になる様にSFR2を調整する。


可（はっきりと）

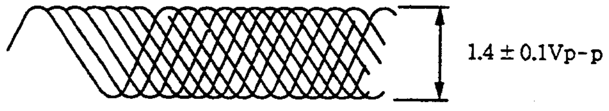

不可

3. RF波形確認

修理の為に光学システムブロックを交換した場合には、RF波形を確認する。

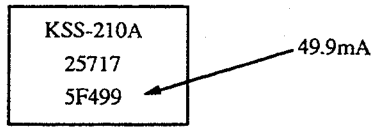
1. オシロスコープをテストポイントTP9 (RF OUT) とTP2 (GND) に接続する。
2. 電源スイッチをONにする。
3. テストディスクTCD-782 (YEDS-18) を入れ、2曲目を再生する。
4. 波形が下図のように出力することを確認する。

RF信号波形



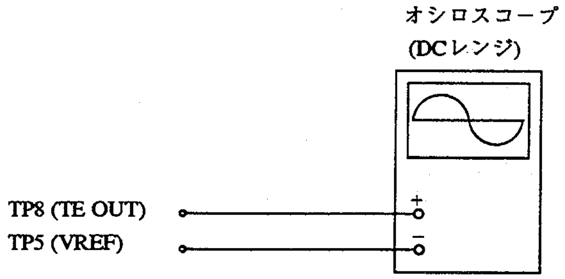
VOLT/DIV: 50mV
TIME/DIV: 1mS

注意: レーザー電流はR4 (10Ω) の両端電圧で確認する。レーザーピックアップ裏側のラベルに示す電流値に対し、±6.0mA以内であること。

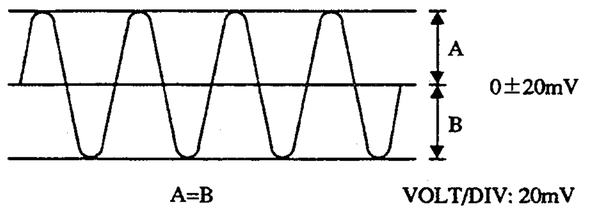


$$\text{レーザー電流Iop} = \frac{\text{R4両端電圧}}{10\Omega}$$

4. トラッキングバランス調整



1. オシロスコープをテストポイントTP8 (TE OUT) とTP5 (VREF) に接続する。
2. SFR3の中点をGNDにおとす。
3. 電源スイッチをONにする。
4. テストディスクTCD-782 (YEDS-18) を入れ、PLAY (▶) ボタンを押す。
5. SFR1を調整し、オシロスコープの波形を下図のように上下対称にする。
6. 調整後、SFR3からアースリード線を外す。



VOLT/DIV: 20mV
TIME/DIV: 1mS

5. トラッキングゲイン調整

この調整を正確に行うためにはサーボアナライザーが必要です。また、このゲインはマージンを持っているため、通常では少し位ずれても問題ありません。したがって、この調整は行わないで下さい。2軸デバイス動作時の機械的ノイズと機械的ショックに対し、トラッキングゲインにてピックアップの追従性を決めます。しかし、これは互いに相反するため、両方を満足する点に調整してあります。

- ゲインを上げると、2軸デバイス動作時の雑音が増加する。
- ゲインを下げると、機械的ショックに弱くなり音飛びが起きやすくなる。

そして、ゲインの調整がずれていると、次表の様な症状が現れます。

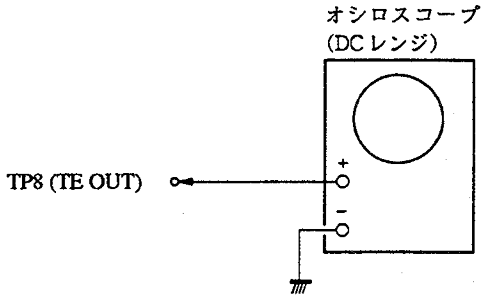
症状 ＼ ゲイン	フォーカス	トラッキング
●STOP→ ▶ PLAY時又は自動選曲時 (|◀◀、▶▶|ボタンを押した時)、演奏開始までの時間が長くなる。(通常は約2秒)	低い	低い又は高い
●STOP→ ▶ PLAY時又は自動選曲時 (|◀◀、▶▶|ボタンを押した時)、演奏が行われずにディスクだけが回転し続ける。	−	低い
●STOP→ ▶ PLAY時、しばらくすると回転が止まる。	低い又は高い	−
●演奏中に音が途切れ、タイムカウンター表示が停止する。	−	低い
●2軸デバイス動作時、ノイズが多くなる。	高い	高い

なお、簡易調整として下記の方法があります。

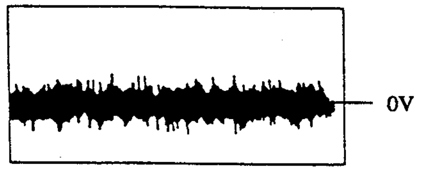
−簡易調整−

注意: 正確には調整出来ないため、調整を行う前のボリュームの位置を憶えておいて、簡易調整を行った後のボリュームの位置と比較して、そのずれが少ないときは元のボリュームの位置に戻して下さい。

調整方法:



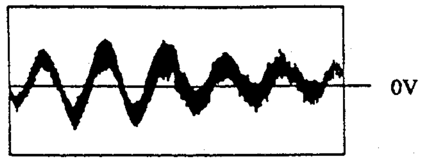
1. セットを水平に置く。(セットを水平に置かないと、2軸デバイスが重力の影響を受けて調整できません。)
2. テストディスクTCD-782 (YEDS-18) を入れ、2曲目を再生する。
3. オシロスコープをTP8 (TE OUT) に接続する。
4. SFR3を調整し、オシロスコープの波形を図の様にする (トラッキングゲイン調整)。



VOLT/DIV: 5mV
TIME/DIV: 1mS

- 悪い例 (調整されている波形と比べて、基本波が現れるようになる。)

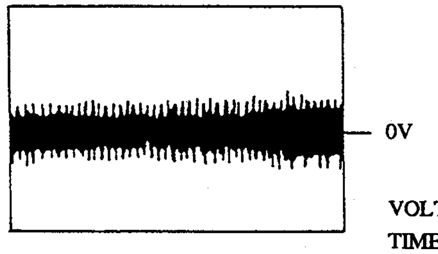
トラッキングゲインが低い時



VOLT/DIV: 5mV
TIME/DIV: 1mS

トラッキングゲインが高い時

基本波の周波数はゲインが低い場合より高い



VOLT/DIV: 5mV
TIME/DIV: 1mS

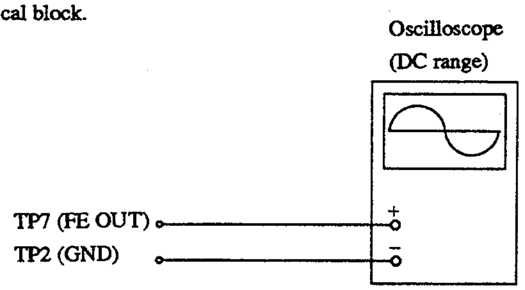
Note: Connect a probe (10:1) of the frequency counter or the oscilloscope to a test point.

1. VCO Frequency Adjustment

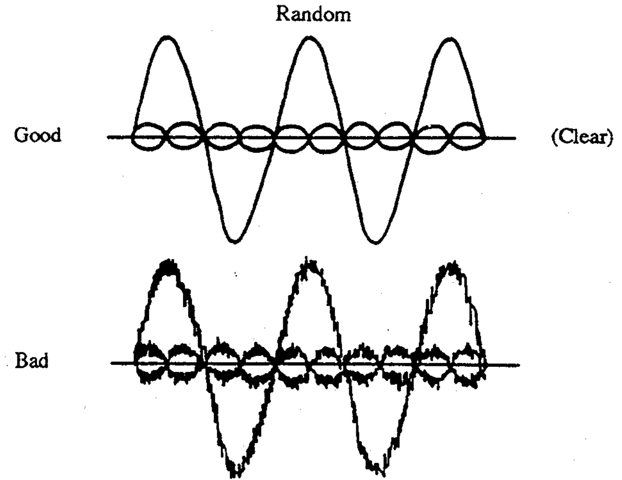
1. Short pin ① and ③ of CON7 with wire.
2. Connect and short between TP3 (ASY) and TP4 (GND).
3. Connect the frequency counter to test points TP1 (VCO) and TP2 (GND).
4. Adjust SFR4 (VCO) so that the frequency counter reading is 4.27±0.02MHz.
5. After the adjustment is completed, remove the short lead wires from TP2 (GND), TP3 (ASY) and TP4.

2. Focus Bias Adjustment

Make the focus bias adjustment when replacing and repairing the optical block.



1. Connect an oscilloscope to test points TP7 (FE OUT) and TP2 (GND).
2. Turn on the power switch.
3. Insert test disc TCD-782 (YEDS-18) and play back the second composition.
4. Adjust SFR2 so that the noise (high frequency) of test point TP7 (FE OUT) is minimized.



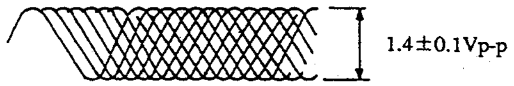
VOLT/DIV: 10mV
TIME/DIV: 1mS

3. RF Waveform Check

This check should be performed whenever the optical system block is replaced in repair.

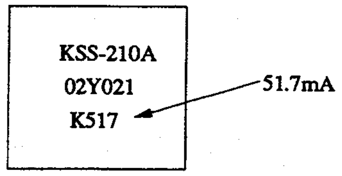
1. Connect an oscilloscope to test points TP9 (RF OUT) and TP2 (GND).
2. Turn on the power switch.
3. Insert test disc TCD-782 (YEDS-18) and play back the second composition.
4. Check that the waveform appears as shown in the figure below.

RF signal waveform



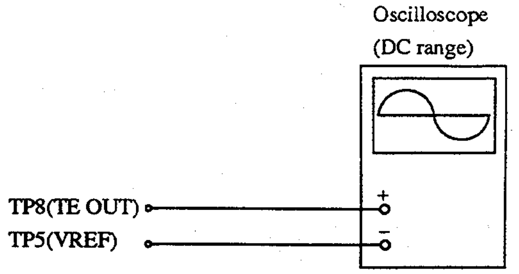
VOLT/DIV: 50mV
TIME/DIV: 1mS

Note: The current of the laser signal can be checked with the voltages on both sides of R4 (10Ω). The difference for the specified value shown on the label must be within ±6.0mA.

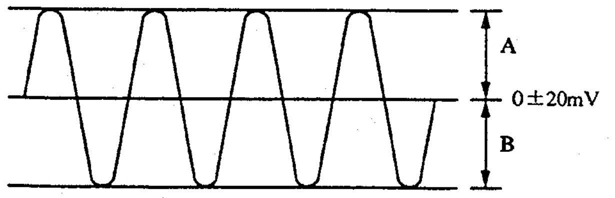


$$\text{Laser current Iop} = \frac{\text{Voltage across R4}}{10\Omega}$$

4. Tracking Balance Adjustment



1. Connect an oscilloscope to test points TP8 (TE OUT) and TP5 (VREF).
2. Connected the intermediate point to GND.
3. Turn on the power switch.
4. Insert test disc TCD-782 (YEDS-18) and press the PLAY (▶) button.
5. Adjust SFR1 so that the waveform on the oscilloscope is vertically symmetrical as shown in the figure below.
6. After the adjustment is completed, remove the ground lead wires from the terminals.



A=B

VOLT/DIV: 20mV
TIME/DIV: 1mS

5. Tracking Gain Adjustment

A servo analyzer is necessary in order to perform this adjustment exactly. However, this gain has a margin, so even if it is slightly off, there is no problem. Therfore, do not perform this adjustment. Focus/tracking gain determines the pick-up follow- up (vertical and horizontal) relative to mechanical noise and mechanical shock when 2-axis device operates. However, as these gains are reciprocate, the adjustment is performed so that both gains are satisfied.

- ● When gain is raised, the noise increases when the 2-axis device opearates.
- ● When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.

When the gain adjustment is not satisfied, the symptoms below appear.

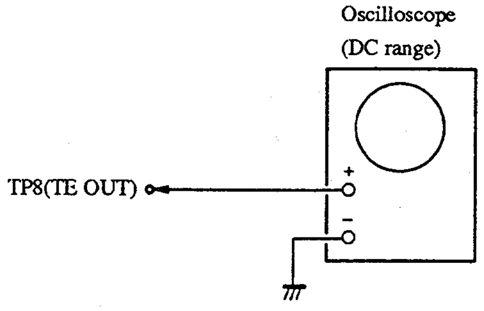
Gain / Symptoms	(Focus)	Tracking
●The time until music starts becomes longer for STOP→ ▶ PLAY or automatic selection (|◀◀, ▶▶| buttons pressed.) (Normally takes about 2 seconds.)	Low	Low or High
●Music dose not start and disc continues to rotate for STOP→ ▶ PLAY or automatic selection (|◀◀, ▶▶|buttons pressed.)	—	Low
●Disc stops to rotate shortly after STOP→ ▶PLAY.	Low or High	—
●Sound is interrupted during PLAY. Or time counter display stops.	—	Low
●More noise during the 2-axis device operation.	High	High

The following is simple adjustment method.

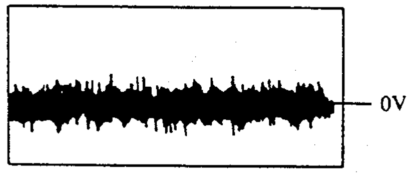
- Simple adjustment -

Note: Since the adjustment cannot be performed exactly, remember the positions of the controls before the adjustment and compare the adjusted position and the original position.
If the difference is a little, return the controls to the original position.

Procedure:



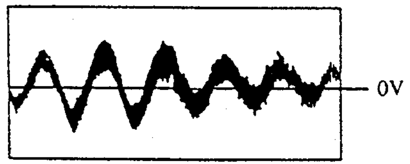
1. Keep the set horizontal. (If the set is not kept horizontally, this adjustment cannot be performed due to the gravity against the 2-axis device.)
2. Insert test disc TCD-782 (YEDS-18) and play back the second composition.
3. Connect an oscilloscope to TP8 (TE OUT) of the main board.
4. Adjust SFR3 so that the waveform appears as shown in the figure below. (tracking gain adjustment)



VOLT/DIV: 5mV
TIME/DIV: 1mS

- ● Incorrect example (The fundamental wave appears as compared with the waveform adjusted.).

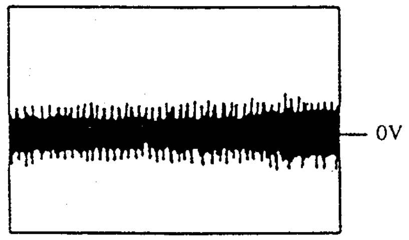
Low tracking gain



VOLT/DIV: 5mV
TIME/DIV: 1mS

High tracking gain

The frecuency of the fundamental wave is higher than that in low gain.



VOLT/DIV: 5mV
TIME/DIV: 1mS

IC DESCRIPTION

IC, µPD78044GF-014

端子番号	端子名称	I/O	機能説明
1 ≀ 7	G7 ≀ G1	O	FL表示デジット出力
8	VDD	–	電源供給
9	I-$\overline{\text{HOLD}}$	I	AC電源が供給されなくなり，入力が「L」になると，コントローラ内部をホールドモードにする。(クロック停止・メモリ保持)
10	O-FMUTE	O	ミュート出力
11	O-STBF	O	シフトレジスタ (4094) ストローブ信号 (PWB，FRONT)
12	O-CLKF	O	シフトレジスタ・PLL　IC用シリアルデータクロック信号 (PWB，FRONT)
13	O-XLT	O	CD制御用
14	O-CLK/SQCK	O	CD制御用
15	O-DATAC	O	CD制御用 (シリアルデータ)
16	I-SUBQ	I	CD制御用
17	$\overline{\text{RESET}}$	–	リセット入力
18	O-DATAF	O	シフトレジスタ・PLL　IC用シリアルデータ (PWB，FRONT)
19	O-$\overline{\text{POWER}}$	O	電源ON/OFF制御
20	AVSS	–	A/Dコンバータ　グランド電位
21	I-MS	I	ミュージックセンサー信号
22	I-FOK/GFS (A/D)	I	CD制御用
23	I-PHOTO (A/D)	I	CDターンテーブル信号
24	I-CDSW (A/D)	I	CDトレーOPEN/CLOSE・メカアップ/ダウン信号
25	I-KEY1 (A/D)	I	キー入力 (1)
26	I-KEY0 (A/D)	I	キー入力 (0)
27	I-TUNE/ST (A/D)	I	チューナー受信中及びステレオ放送受信中信号入力
28	I-SPEANA (A/D)	I	スペアナ表示用アナログ入力
29	AVDD	–	A/Dコンバータ　アナログ電源
30	AVREF	–	A/Dコンバータ　基準電圧入力
31	I-SENS	I	CD制御用
32	XT2	–	サブクロック端子 (未使用)
33	VSS	–	GND
34 35	X1 X2	–	4.19MHz　発振回路
36	O-$\overline{\text{MUTE}}$	O	ミュート出力
37	O-DISHF	O	ターンテーブルＦ出力
38	O-DISHR	O	ターンテーブルＲ出力
39	O-OPEN	O	トレーオープン出力
40	O-CLOSE	O	トレークローズ出力
41	O-CLKM	O	シフトレジスタ・PLL　IC用シリアルデータクロック信号 (PWB，MAIN)
42	O-DATAM	O	シフトレジスタ・PLL　IC用シリアルデータ (PWB，MAIN)
43	O-STBM	O	シフトレジスタ (4094) ストローブ信号 (PWB，MAIN)
44	O-PLLCE	O	チューナー用PLL　ICチップエナブル出力
45	I-SCOR	I	CD制御用
46	O-$\overline{\text{SWSCAN}}$	O	スイッチスキャンタイミング出力
47	I-RMC	O	リモートコントロール信号
48	IC	–	GND (内部接続)
49	O-$\overline{\text{SOL2}}$	O	ソレノイド2出力
50	O-$\overline{\text{SOL1}}$	O	ソレノイド1出力
51	O-$\overline{\text{MOTOR}}$	O	デッキモーター出力
52	VDD	–	電源供給
53 ≀ 68	a ≀ p	I/O	FL表示セグメント出力及びスイッチスキャン
69 70	q r	O	FL表示セグメント出力
71	V-LOAD	–	FL表示用電源 (負)
72 ≀ 76	s ≀ w	O	FL表示セグメント出力
77 ≀ 80	G11 ≀ G8	O	FL表示用デジット出力

IC, BU4094BF (IC401)

端子番号	端子名称	I/O	機能説明
4	Q1 ($\overline{\text{CD}}$)	O	LED出力　FUNCTION　CD
5	Q2 ($\overline{\text{TAPE}}$)	O	LED出力　FUNCTION　TAPE
6	Q3 ($\overline{\text{AUX}}$)	O	LED出力　FUNCTION　AUX
7	Q4 ($\overline{\text{TUNER}}$)	O	LED出力　FUNCTION　TUNER
11	Q8 (VR UP)	O	モーターボリュウムコントロール出力　UP
12	Q7 (VR DN)	O	モーターボリュウムコントロール出力　DOWN
13	Q6 (GEQB)	O	グライココントロール出力　B
14	Q5 (GEQA)	O	グライココントロール出力　A

IC, BU4094BF (IC402)

端子番号	端子名称	I/O	機能説明
4	Q1 ($\overline{\text{PAUSE}}$)	O	LED出力　PAUSE
5	Q2 ($\overline{\text{STOP}}$)	O	LED出力　STOP
6	Q3 ($\overline{\text{REV}}$)	O	LED出力　REV
7	Q4 ($\overline{\text{FWD}}$)	O	LED出力　FWD
11	Q8 ($\overline{\text{FF}}$)	O	LED出力　FF
12	Q7 ($\overline{\text{REW}}$)	O	LED出力　REW
13	Q6 (–)	–	–
14	Q5 (–)	–	–

IC, BU4094BF (IC403)

端子番号	端子名称	I/O	機　能　説　明
4	Q1 (HSP)	O	DECKモータースピードコントロール出力　ノーマル/ハイ
5	Q2 ($\overline{\text{DISC1}}$)	O	LED出力　DISC　1
6	Q3 ($\overline{\text{DISC2}}$)	O	LED出力　DISC　2
7	Q4 ($\overline{\text{DISC3}}$)	O	LED出力　DISC　3
11	Q8 (SPE RE)	O	スペアナIC　コントロール出力　RESET
12	Q7 (SPE A)	O	スペアナIC　コントロール出力　A
13	Q6 (SPE B)	O	スペアナIC　コントロール出力　B
14	Q5 (SPE C)	O	スペアナIC　コントロール出力　C

IC, BU4094 (IC602)

端子番号	端子名称	I/O	機　能　説　明
4	Q1 (BEAT)	O	TUNER　ビート　切換出力
5	Q2 (FM AUTO/EMPH)	O	TUNER　AUTO/CD　エンファシス切換出力
6	Q3 (REC/$\overline{\text{PB}}$)	O	録音/再生　切換出力
7	Q4 (DOLBY ON/OFF)	O	DOLBY　ON/OFF　切換出力
11	Q8 (BIAS)	O	DECK　バイアス　出力
12	Q7 (RMT)	O	DECK　RECミュート　出力
13	Q6 (HSP)	O	DECK　ハイスピードイコライザー　切換出力
14	Q5 (1PB)	O	DECK1/DECK2　再生切換出力

IC, BU4094 (IC603)

端子番号	端子名称	I/O	機　能　説　明
4	Q1 (VOCAL F)	O	ボーカル・フェーダー出力
5	Q2 (T-BASS A)	O	T-BASS　コントロール出力　A
6	Q3 (T-BASS B)	O	T-BASS　コントロール出力　B
7	Q4 (T-BASS $\overline{\text{ON}}$)	O	T-BASS　ON/OFF　切換出力
11	Q8 (CD ON)	O	CD　ON/OFF　切換出力
12	Q7 (FUNC-B)	O	FUNCTION　コントロール出力　B
13	Q6 (FUNC-A)	O	FUNCTION　コントロール出力　A
14	Q5 (−)	−	−

IC DESCRIPTION

IC, µPD78044GF-014

Pin No.	Pin Name	I/O	Description
1 ~ 7	G7 ~ G1	O	FL Display digit output.
8	VDD	−	Power supply.
9	I-$\overline{\text{HOLD}}$	I	When the AC power is not supplied and the input "L", the controller is held (clock stop and memory maintain).
10	O-FMUTE	O	Mute output.
11	O-STBF	O	Shift register (4094) strobe signal (PWB, FRONT).
12	O-CLKF	O	Serial data clock signal for the shift register, PLL IC (PWB, FRONT).
13	O-XLT	O	CD control.
14	O-CLK/SQCK	O	CD control.
15	O-DATAC	O	CD control (serial data).
16	I-SUBQ	I	CD control.
17	$\overline{\text{RESET}}$	−	Reset input.
18	O-DATAF	O	Serial data for the shift register, PLL IC (PWB, FRONT).
19	O-$\overline{\text{POWER}}$	O	Power ON/OFF control.
20	AVSS	−	A/D converter ground.
21	I-MS	I	Music sensor signal.
22	I-FOK/GFS (A/D)	I	CD control.
23	I-PHOTO (A/D)	I	CD turn table signal.
24	I-CDSW (A/D)	I	CD tray OPEN/CLOSE, mechanism UP/DOWN signal.
25	I-KEY1 (A/D)	I	Key data input (1).
26	I-KEY0 (A/D)	I	Key data input (0).
27	I-TUNE/ST (A/D)	I	Signal input while the tuner is receiving signals and the stereo system signal.
28	I-SPEANA (A/D)	I	Analog input for the spectrum analyzer.
29	AVDD	−	A/D converter analog power supply.
30	AVREF	−	A/D converter reference voltage.
31	I-SENS	I	CD control.
32	XT2	−	Sub clock terminal (Not used).
33	VSS	−	GND.
34 35	X1 X2	−	4.19MHz oscillation circuit.
36	O-$\overline{\text{MUTE}}$	O	Mute output.
37	O-DISHF	O	Turn table F output.
38	O-DISHR	O	Turn table R output.
39	O-OPEN	O	CD tray OPEN output.
40	O-CLOSE	O	CD tray CLOSE output.
41	O-CLKM	O	Shift register clock signal for the shift register, PLL IC (PWB, MAIN).
42	O-DATAM	O	Serial data for the shift register PLL IC.
43	O-STBM	O	Shift register (4094) strobe signal (PWB, MAIN).
44	O-PLLCE	O	PLL IC chip enable output for the tuner.
45	I-SCOR	I	CD control.
46	O-$\overline{\text{SWSCAN}}$	O	Switch scan timing output.

Pin No.	Pin Name	I/O	Description
47	I-RMC	O	Remote control signal.
48	IC	–	GND (connected internal).
49	O-$\overline{\text{SOL2}}$	O	Solenoid 2 output.
50	O-$\overline{\text{SOL1}}$	O	Solenoid 1 output.
51	O-$\overline{\text{MOTOR}}$	O	Deck motor output.
52	VDD	–	Power supply.
53 ~ 68	a ~ p	I/O	FL display segment output and switch scan.
69 70	q r	O	FL display segment output.
71	V-LOAD	–	FL display power (negative).
72 ~ 76	s ~ w	O	FL display segment output.
77 ~ 80	G11 ~ G8	O	FL dispay digit output.

IC, BU4094 (IC401)

Pin No.	Pin Name	I/O	Description
4	Q1 ($\overline{\text{CD}}$)	O	LED output (function CD).
5	Q2 ($\overline{\text{TAPE}}$)	O	LED output (function TAPE).
6	Q3 ($\overline{\text{AUX}}$)	O	LED output (function AUX).
7	Q4 ($\overline{\text{TUNER}}$)	O	LED output (function TUNER).
11	Q8 (VR UP)	O	Motor volume control output (UP).
12	Q7 (VR DN)	O	Motor volume control output (DOWN).
13	Q6 (GEQB)	O	Graphic equalizer control outplut B.
14	Q5 (GEQA)	O	Graphic equalizer control output A.

IC, BU4094 (IC402)

Pin No.	Pin Name	I/O	Description
4	Q1 ($\overline{\text{PAUSE}}$)	O	LED output (PAUSE).
5	Q2 ($\overline{\text{STOP}}$)	O	LED output (STOP).
6	Q3 ($\overline{\text{REV}}$)	O	LED output (REV).
7	Q4 ($\overline{\text{FWD}}$)	O	LED output (FWD).
11	Q8 ($\overline{\text{FF}}$)	O	LED output (FF).
12	Q7 ($\overline{\text{REW}}$)	O	LED output (REW).
13	Q6 (–)	–	–
14	Q5 (–)	–	–

IC, BU4094 (IC403)

Pin No.	Pin Name	I/O	Description
4	Q1 (HSP)	O	DECK motor speed control output (normal/high).
5	Q2 ($\overline{\text{DISC1}}$)	O	LED output (DISC 1).
6	Q3 ($\overline{\text{DISC2}}$)	O	LED output (DISC 2).
7	Q4 ($\overline{\text{DISC3}}$)	O	LED output (DISC 3).
11	Q8 (SPE RE)	O	Spectrum analyzer IC control output (RESET).
12	Q7 (SPE A)	O	Spectrum analyzer IC control output (A).
13	Q6 (SPE B)	O	Spectrum analyzer IC control output (B).
14	Q5 (SPE C)	O	Spectrum analyzer IC control output (C).

IC, BU4094 (IC602)

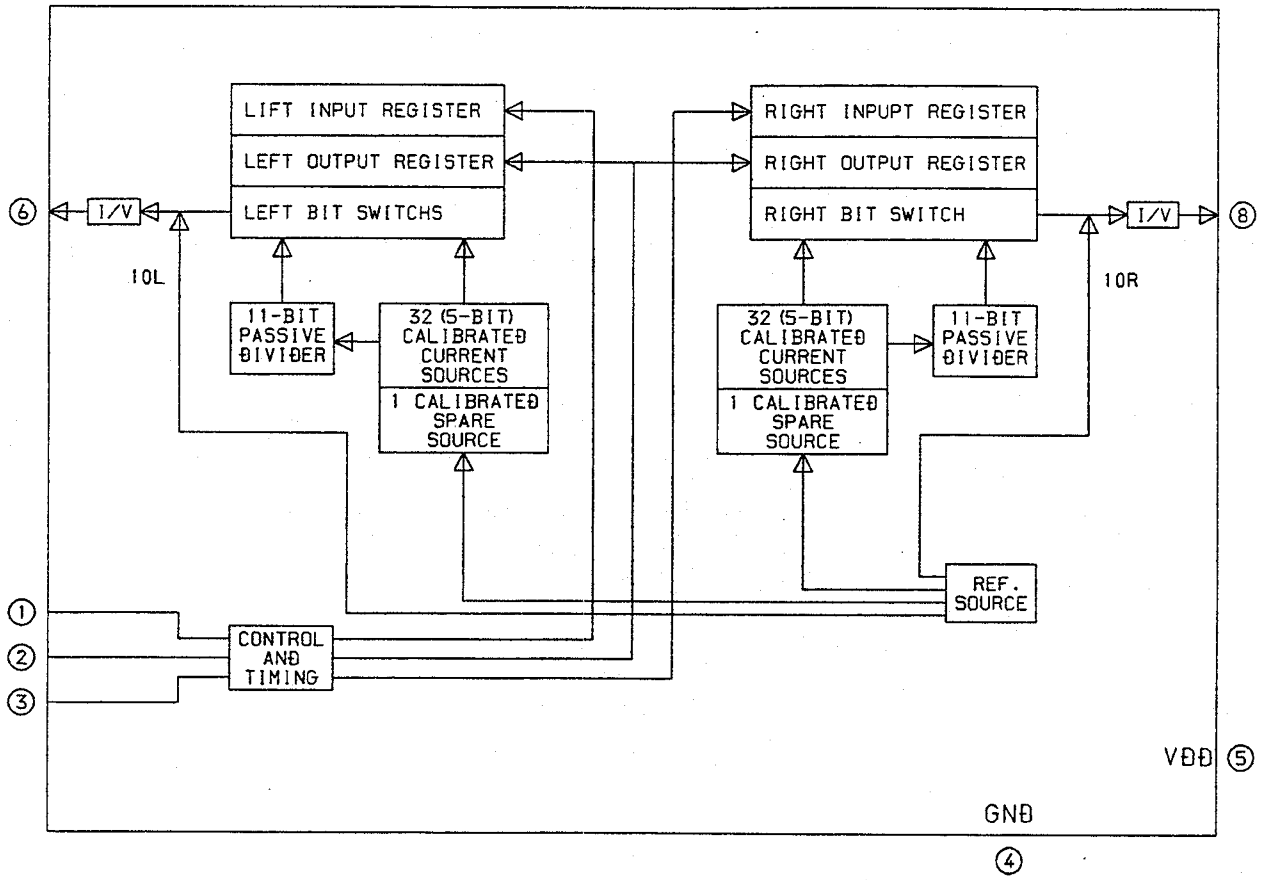
Pin No.	Pin Name	I/O	Description
4	Q1 (BEAT)	O	TUNER beat switching output.
5	Q2 (FM AUTO/EMPH)	O	TUNER AUTO/CD emphasis switching output.
6	Q3 (REC/$\overline{\text{PB}}$)	O	Record/playback switching output.
7	Q4 (DOLBY ON/OFF)	O	DOLBY ON/OFF switching output.
11	Q8 (BIAS)	O	DECK bias output.
12	Q7 (RMT)	O	DECK REC mute output.
13	Q6 (HSP)	O	DECK high speed equalizer switching output.
14	Q5 (1PB)	O	DECK 1/DECK 2 playback switching output.

IC, BU4094 (IC603)

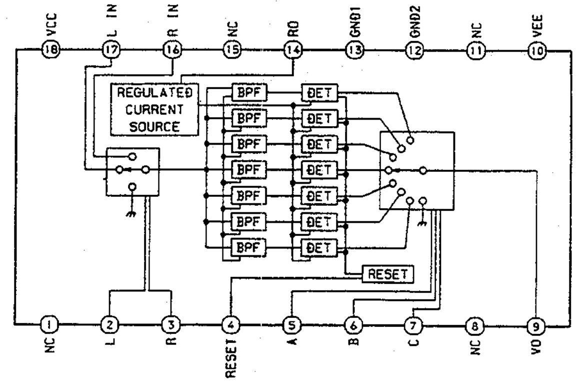
Pin No.	Pin Name	I/O	Description
4	Q1 (VOCAL F)	O	Vocal fader output.
5	Q2 (T-BASS A)	O	T-BASS control output A.
6	Q3 (T-BASS B)	O	T-BASS control output B.
7	Q4 (T-BASS $\overline{\text{ON}}$)	O	T-BASS ON/OFF switching output.
11	Q8 (CD ON)	O	CD ON/OFF switching output.
12	Q7 (FUNC-B)	O	FUNCTION control output B.
13	Q6 (FUNC-A)	O	FUNCTION control output A.
14	Q5 (–)	–	–

IC BLOCK DIAGRAM

TDA1311T


LIFT INPUT REGISTER
LEFT OUTPUT REGISTER
LEFT BIT SWITCHS
RIGHT INPUPT REGISTER
RIGHT OUTPUT REGISTER
RIGHT BIT SWITCH
I/V
I/V
⑥
⑧
IOL
IOR
11-BIT PASSIVE DIVIDER
32 (5-BIT) CALIBRATED CURRENT SOURCES
1 CALIBRATED SPARE SOURCE
32 (5-BIT) CALIBRATED CURRENT SOURCES
1 CALIBRATED SPARE SOURCE
11-BIT PASSIVE DIVIDER
REF. SOURCE
①
②
③
CONTROL AND TIMING
VDD ⑤
GND
④

BA3826S


VCC
L IN
R IN
NC
RO
GND1
GND2
NC
VEE
⑱
⑰
⑯
⑮
⑭
⑬
⑫
⑪
⑩
REGULATED CURRENT SOURCE
BPF
DET
RESET
①
②
③
④
⑤
⑥
⑦
⑧
⑨
NC
L
R
RESET
A
B
C
NC
VO

INPUT SELECTOR LOGIC TABLE
入力切換えロジック表

SELECTOR		INPUT
L(5PIN)	R(6PIN)	
L	L	UNDETERMINED 不　定
L	H	L IN
H	L	R IN
H	H	OFF

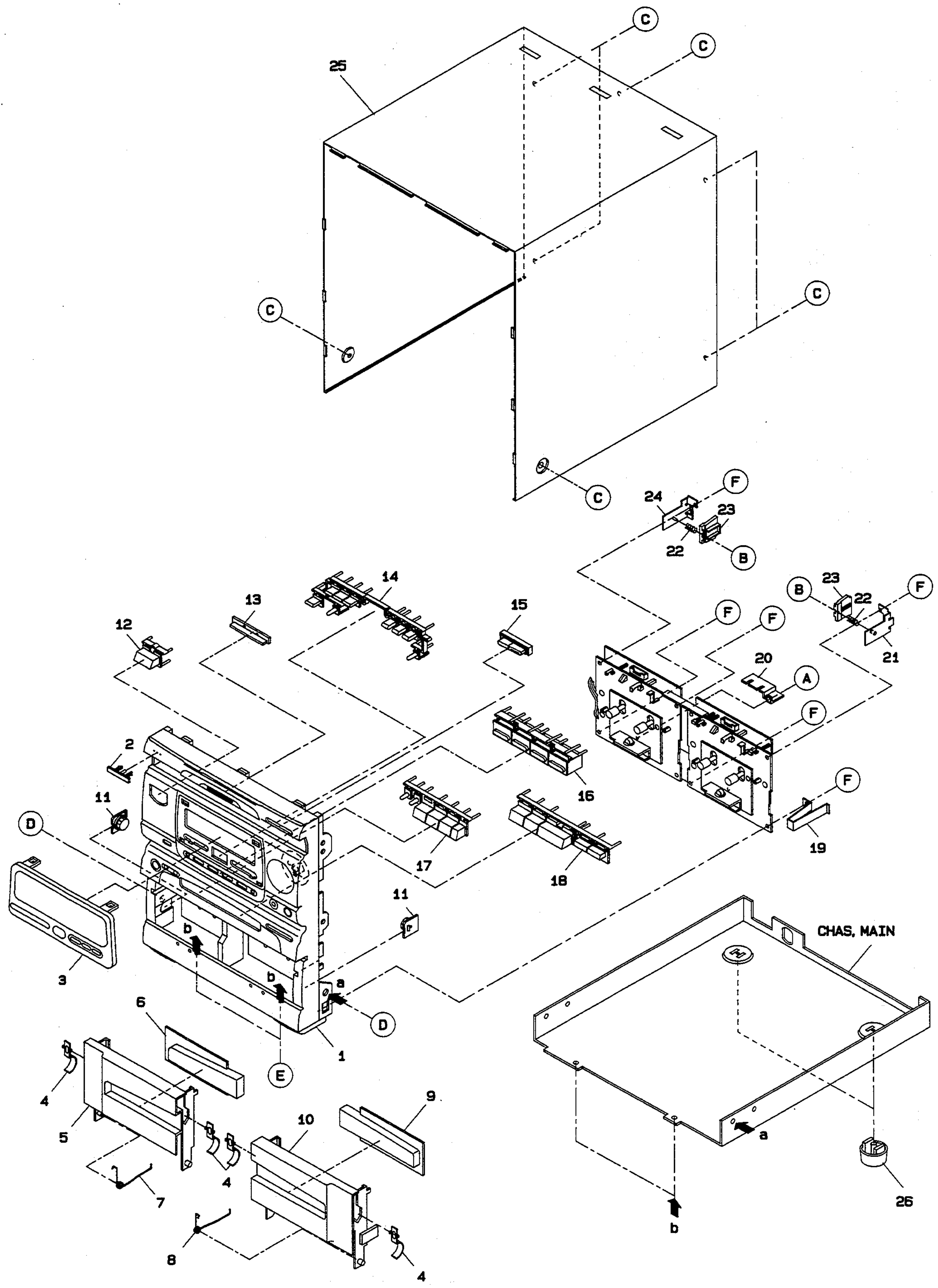
OUTPUT SELECTOR LOGIC TABLE
出力切換えロジック表

SELECT			OUTPUT
A(5PIN)	B(6PIN)	C(7PIN)	VO(9PIN)
H	H	H	0
L	H	H	F01
H	L	H	F02
L	L	H	F03
H	H	L	F04
L	H	L	F05
H	L	L	F06
L	L	L	F07

下記のICブロック図は、XG－330のサービスマニュアルを参照して下さい。 See the NSX－330 for the IC block diagram below.	
XG－500／NSX－500／NSX－3500	XG－330／NSX－330
IC,BA6296FP	IC,BA6296FP
IC,BU4052B	IC,BU4052B
IC,HA12134A	IC,HA12134A
IC,LA1265	IC,LA1265
IC,LB1641	IC,LB1641
IC,TA7343AP	IC,TA7343AP
IC,TA8124	IC,TA8124

下記のIC端子説明は、XG－330のサービスマニュアルを参照して下さい。 See the NSX－330 for the IC description below.	
XG－500／NSX－500／NSX－3500	XG－330／NSX－330
IC,LM7001M	IC,LM7001M
IC,CXA1081M	IC,CXA1081M
IC,CXA1082BQ	IC,CXA1082BQ
IC,CXD1167Q	IC,CXD1167Q

MECHANICAL EXPLODED VIEW 1/3

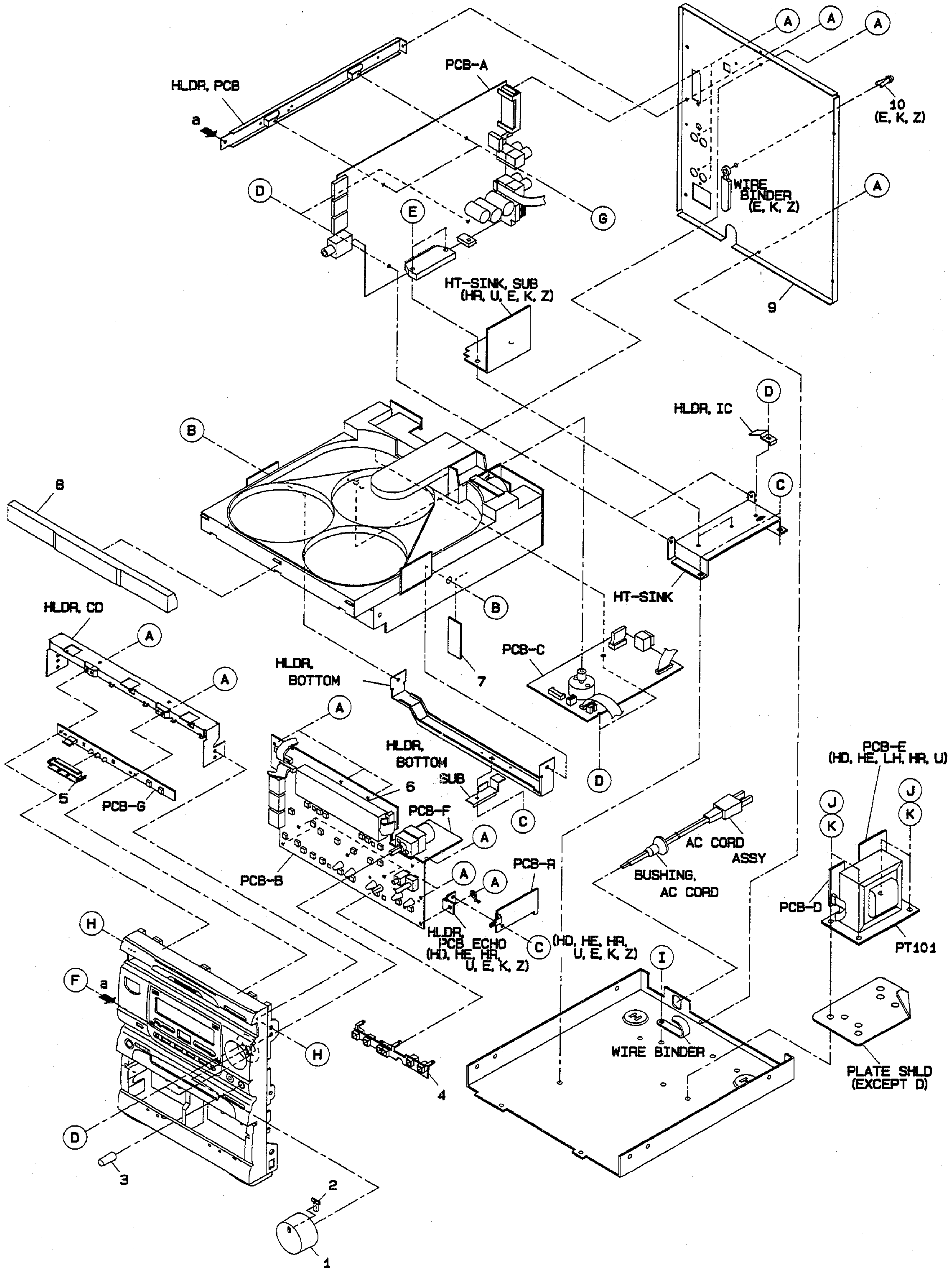


MECHANICAL PARTS LIST 1/3

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	82-NF5-041-019	2M	CAB ASSY, FR (D)
1	82-NF5-042-019		CAB ASSY, FR HE (HD, HE, HR)
1	82-NF5-045-019		CAB ASSY, FR LH (LH)
1	82-NF5-043-019		CAB ASSY, FR U (U)
1	82-NF5-044-019		CAB ASSY, E (E, K, Z)
2	82-NE8-032-019	1A	BADGE, AIWA 27.5
3	82-NF5-013-010	1F	WINDOW, DISPLAY
4	81-MX4-223-019	0E	SPR-P, CASS
5	82-NF5-003-019	1D	BOX, CASS 1 (D)
5	82-NF5-034-01S		BOX, CASS 1 EX (EXCEPT D)
6	82-NF5-014-010	1A	WINDOW, CASS 1
7	82-NF5-218-019	0E	SPR-T, EJECT 1
8	82-NF5-219-019	0E	SPR-T, EJECT 2
9	82-NF5-015-010	1A	WINDOW, CASS 2
10	82-NF5-004-019	1D	BOX, CASS 2 (D)
10	82-NF5-035-01S		BOX, CASS 2 EX (EXCEPT D)
11	87-063-165-019	0E	OIL-DMPR 150
12	82-NF5-005-010	0E	KEY, POWER
13	82-NF5-020-010	0E	IND, DISC
14	82-NF5-019-019	1B	KEY, GEQ T (D)
14	82-NF5-007-01S		KEY, GEQ (EXCEPT D)
15	82-NF5-006-010	1A	KEY, CD
16	82-NF5-008-010	1F	KEY ASSY, FUN
17	82-NF5-011-010	1B	KEY, REC
18	82-NF5-010-010	1C	KEY, PLAY
19	82-NF5-216-019	0E	PLATE, EARTH MECHA
20	82-ZM3-213-010	0E	PLATE, SHLD
21	82-NF5-205-010	1A	HLDR ASSY, LOCK 2
22	80-MV3-210-110	0E	SPR-C, LOCK (D, HD)
22	80-MV3-218-019		SPR-C, LOCK (EXCEPT D, HD)
23	80-CD3-233-010	0E	PLATE, LOCK
24	82-NF5-204-010	1A	HLDR ASSY, LOCK 1
25	82-NF5-017-019	2M	CAB, STEEL (D, HD, HE, HR, LH U, EE, K, Z)
25	82-NF5-036-018		CAB, STEEL (E)
26	87-085-221-010	0E	FOOT, H 13.5
A	87-571-032-410	0E	VIT+2-3
B	87-081-808-010	0E	PW, 1.7-3.5-0.25
C	87-067-641-010	0E	UTT2+3-8 BLK
D	87-591-094-410	0E	QIT+3-6
E	87-067-716-010	0E	BVTT+3-6 BLK
F	87-067-761-010	0E	BVT2+3-10 BLK

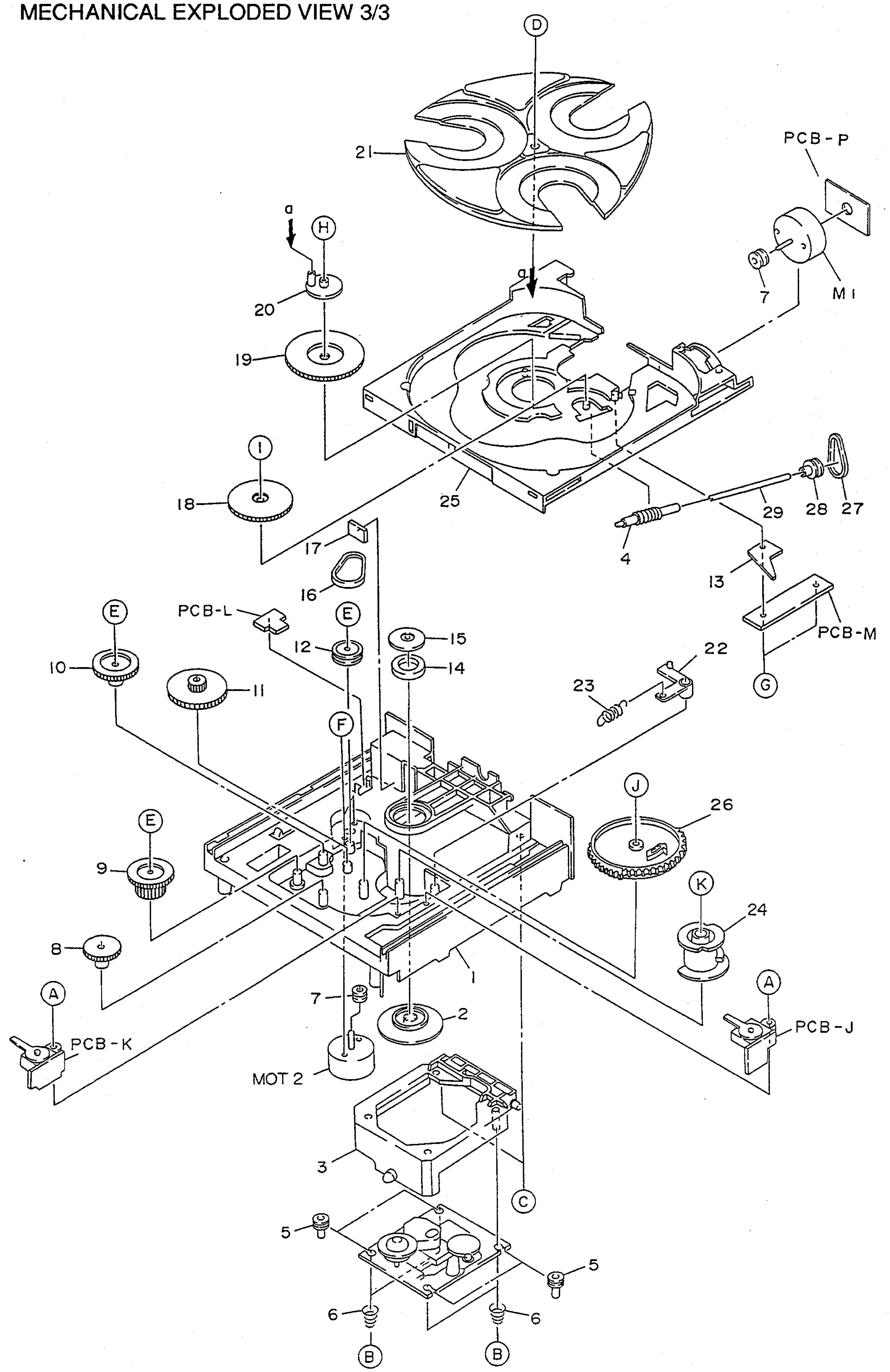
MECHANICAL EXPLODED VIEW 2/3


HLDR, PCB
a
PCB-A
A
A
A
10
(E, K, Z)
D
E
G
WIRE BINDER (E, K, Z)
A
HT-SINK, SUB (HR, U, E, K, Z)
9
D
HLDR, IC
B
C
8
HT-SINK
B
HLDR, CD
A
PCB-C
A
HLDR, BOTTOM
7
A
HLDR, BOTTOM SUB
6
5
PCB-G
PCB-F
C
D
PCB-E (HD, HE, LH, HR, U)
J
J
K
K
AC CORD ASSY
A
PCB-R
PCB-B
A
A
BUSHING, AC CORD
PCB-D
HLDR, PCB ECHO (HD, HE, HR, U, E, K, Z)
C
(HD, HE, HR, U, E, K, Z)
I
PT101
H
F
a
H
WIRE BINDER
4
PLATE SHLD (EXCEPT D)
D
3
2
1

MECHANICAL PARTS LIST 2/3

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	82-NF5-012-010	1A	KNOB, VOL
2	82-NE6-016-019	0E	IND, MAIN
3	81-MX4-019-019	0E	KNOB, MIC
4	82-NF5-213-019	0E	GUIDE LED
5	82-NF5-214-010	0E	GUIDE DISC
6	82-NF5-212-010	1A	GUIDE, FL
7	87-085-227-010	0E	SH, 12.5-5-0.5
8	82-NF5-018-019	1C	PANEL, TRAY (D)
8	82-NF5-031-019		PANEL, TRAY EX (EXCEPT D)
9	82-NF5-002-219	1H	PANEL, REAR B (D)
9	82-NF5-052-01S		PANEL, REAR HDB (HD)
9	82-NF5-023-019		PANEL, REAR HEJBNM (HE)
9	82-NF5-051-019		PANEL, REAR HRJBNM (HR)
9	82-NF5-024-019		PANEL, REAR LHJBNM (LH)
9	82-NF5-025-019		PANEL, REAR UBNM (U)
9	82-NF5-071-019		PANEL, REAR EBNM (E)
9	82-NF5-053-019		PANEL, REAR KBNM (K)
9	82-NF5-028-019		PANEL, REAR ZBNE (Z)
10	87-084-077-019		NYLON RIVET 3.5-4.5 (E, K, Z)
A	87-067-761-010	0E	BVT2+3-10 BLK
B	87-067-641-010	0E	UTT2+3-8 W/O SLOT BLK
C	87-067-716-010	0E	BVTT+3-6 BLK
D	87-067-579-010	0E	BVT2+3-8 W/O SLOT
E	87-067-581-019	0E	BVT2+3-15 W/O (D, HD, HE, LH)
E	87-067-698-010		BVT2+3-18 W/O (HR, U, E, K, Z)
F	87-591-094-410	0E	QIT+3-6
G	87-067-633-010	0E	BVT2+3-8 W CONVEX
H	87-721-097-410	0E	QT2+3-12 GOLD
I	87-067-585-010	0E	BVTT+4-6
J	87-078-019-019	0E	S-SCREW, IT+4-6 (D)
J	87-067-586-010		BVTT+4-8 (EXCEPT D)
K	87-422-308-010		SW4 (EXCEPT D)

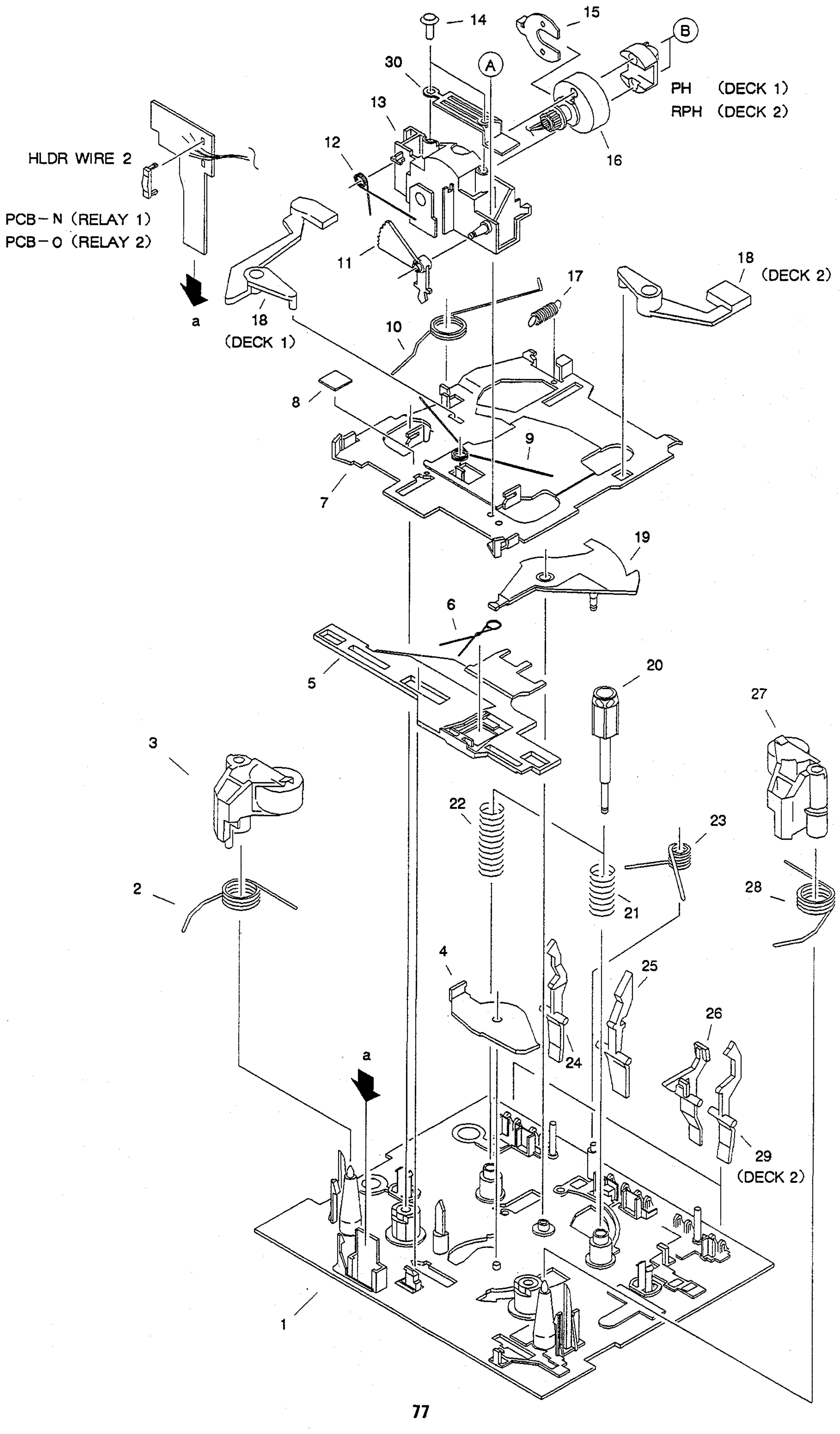
MECHANICAL EXPLODED VIEW 3/3



MECHANICAL PARTS LIST 3/3

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	81-ZG1-261-010	2M	CHAS, MECH M (D, HD)
1	81-ZG1-246-119		CHAS, MECH M (EXCEPT D, HD)
2	81-ZG1-228-110	1A	HLDR, MAGNET
3	81-ZG1-253-01S	1F	HLDR, MECH MK2
4	81-ZG1-221-010	0E	WORM GEAR, TT
5	81-ZG1-230-010	1A	G-CUSH, MECH
6	81-ZG1-231-010	0E	SPR-C, MECH
7	81-ZG1-212-010	0E	PULLY, LOAD MO
8	81-ZG1-250-019	0E	GEAR, TRAY RELAY MK2
9	81-ZG1-257-019	1A	GEAR, TRAY B MK2
10	81-ZG1-256-019	0E	GEAR, TRAY A MK2
11	81-ZG1-251-019	0E	GEAR, RELAY MK2
12	81-ZG1-211-010	0E	PULLEY, RELAY
13	81-ZG1-240-010	0E	SPR-P, WORM
14	86-531-219-010	1B	MAGNET, CLAMPER
15	81-ZG1-255-01S	0E	PLATE, MAGNET
16	81-ZG1-232-010	0E	BELT, TRAY
17	81-ZG1-238-110	0E	CUSH, TRAY IN
18	81-ZG1-222-010	1A	WORM WHEEL, TT
19	81-ZG1-202-010	1A	GEAR, MAIN
20	81-ZG1-252-010	1A	LEVER, TT MK2
21	81-ZG1-002-110	2A	TURNTABLE (D, HD)
21	81-ZG1-008-119		TURNTABLE, NO2 (EXCEPT D, HD)
22	81-ZG1-213-110	0E	PLATE, CAM
23	81-ZG1-235-010	0E	SPR-E, CAM
24	81-ZG1-206-110	1B	GEAR, MECH CAM
25	81-ZG1-001-110	2M	TRAY (D, HD)
25	81-ZG1-011-019		TRAY, MK2 (EXCEPT D, HD)
26	81-ZG1-205-110	1B	GEAR, TRAY CAM
27	81-ZG1-233-110	0E	BELT, TT
28	81-ZG1-236-010	0E	PULLEY, TT MO
29	81-ZG1-260-019	1A	SHAFT, WORM S
A	81-653-215-010	0E	SPECIAL SCREW VT2
B	81-ZG1-254-01S	0E	S-SCREW, MECH HLDR
C	87-561-096-210	0E	VFT1+3-10
D	81-ZG1-239-010	0E	S-SCREW, TT
E	87-067-945-110	0E	VFT1+3-12
F	87-251-071-410	0E	U+2.6-4
G	87-067-579-010	0E	BVT2+3-8 W/O SLOT
H	87-078-029-010	0E	VFT2+3-13
I	87-761-095-410	0E	VFT2+3-8
J	81-ZG1-264-010	0E	S-SCREW CAM
K	87-067-828-010	0E	VFT2+3-15 DIA 10

DECK MECHANISM EXPLODED VIEW 1/2


14
15
B
30
A
PH (DECK 1)
RPH (DECK 2)
13
12
16
HLDR WIRE 2
PCB-N (RELAY 1)
PCB-O (RELAY 2)
11
18
(DECK 2)
17
a
18
(DECK 1)
10
8
9
7
19
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20
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22
23
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a
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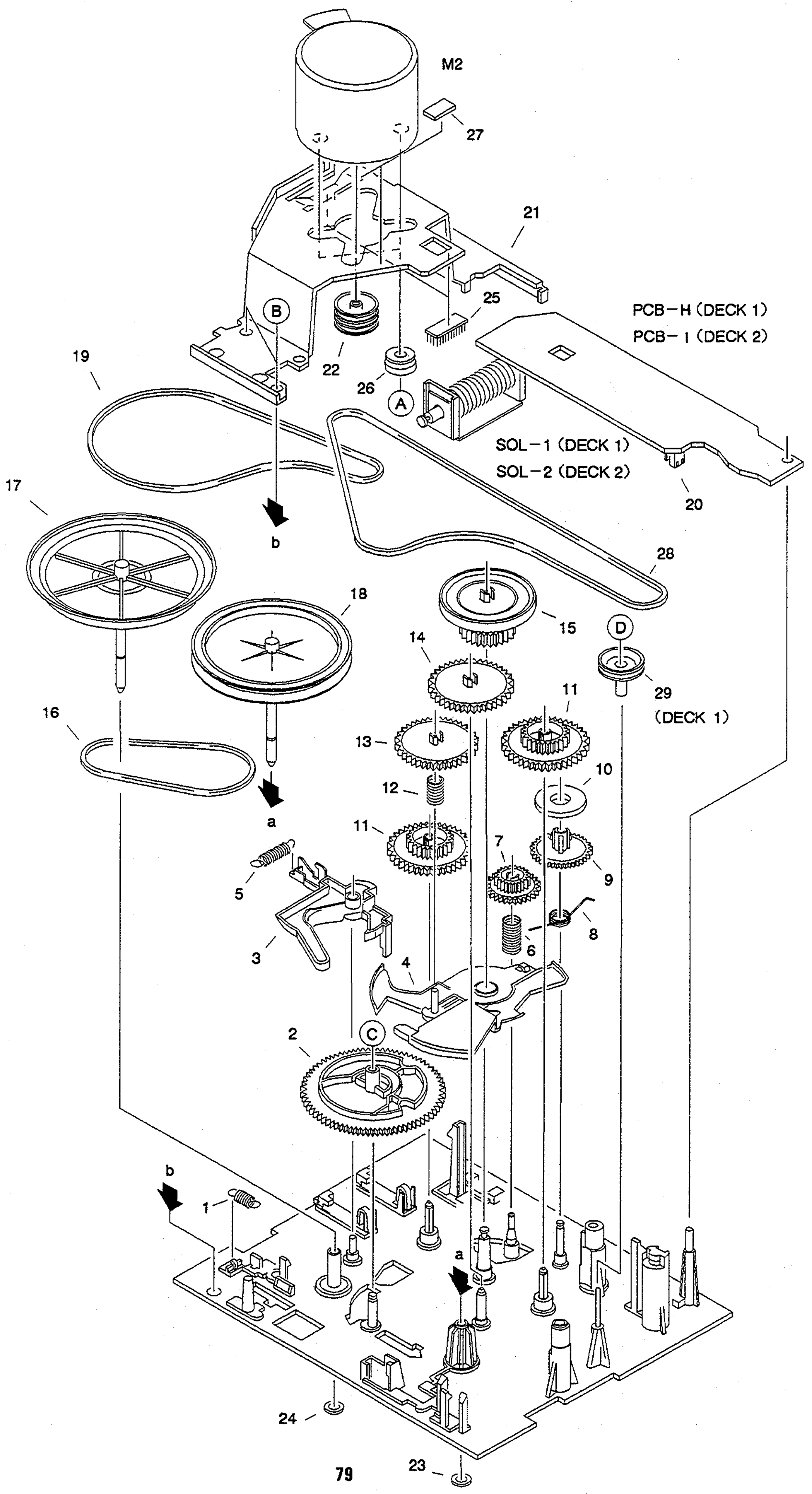
(DECK 2)
1

DECK MECHANISM PARTS LIST 1/2

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	82-ZM3-211-010	1D	CHAS ASSY, M3 (DECK 1)
1	82-ZM1-201-010	1D	CHAS ASSY, MECH (DECK 2)
2	82-ZM1-258-010	0E	SPR-T, PINCH L
3	82-ZM1-248-110	1A	LVR ASSY, PINCH L
4	82-ZM1-295-110	0E	PLATE ASSY, LINK
5	82-ZM1-266-010	0E	LVR, DIR
6	82-ZM1-214-010	0E	SPR-T, DIR
7	82-ZM1-206-010	1A	CHAS, HEAD
8	87-078-014-019	0E	SH, 5-5-0.05
9	82-ZM1-269-010	0E	SPR-T, BRG
10	82-ZM1-219-010	0E	SPR-T, LINK
11	82-ZM1-210-010	0E	GEAR, H T
12	82-ZM1-213-010	0E	SPR-T, HEAD
13	82-ZM1-207-010	1A	GUIDE, TAPE
14	82-ZM1-283-210	0E	S-SCREW, AZIMUTH
15	82-ZM1-209-010	0E	PLATE, HEAD
16	82-ZM1-208-010	0E	HLDR, HEAD
17	82-ZM1-218-010	0E	SPR-E, HB
18	82-ZM1-263-110	0E	LVR, EJECT L (DECK 1)
18	82-ZM1-264-010	0E	LVR, EJECT R (DECK 2)
19	82-ZM1-222-010	0E	LVR, PLAY
20	82-ZM1-217-010	0E	REEL TABLE
21	82-ZM1-244-010	0E	SPR-C, BT
22	82-ZM1-285-010	0E	SPR-C, BT L
23	82-ZM1-257-010	0E	SPR-T, CAS
24	82-ZM1-241-010	0E	LVR, MC
25	82-ZM1-242-010	0E	LVR, CAS
26	82-ZM1-243-010	0E	LVR, STOP
27	82-ZM1-253-110	1A	LVR ASSY, PINCH R
28	82-ZM1-259-010	0E	SPR-T, PINCH R
29	82-ZM1-240-010	0E	LVR, REC (DECK 2)
30	82-ZM1-298-010	0E	SPR-P, EARTH
A	87-585-036-410	0E	UIT+2-8
B	80-ZM6-207-019	0E	V+1.6-7

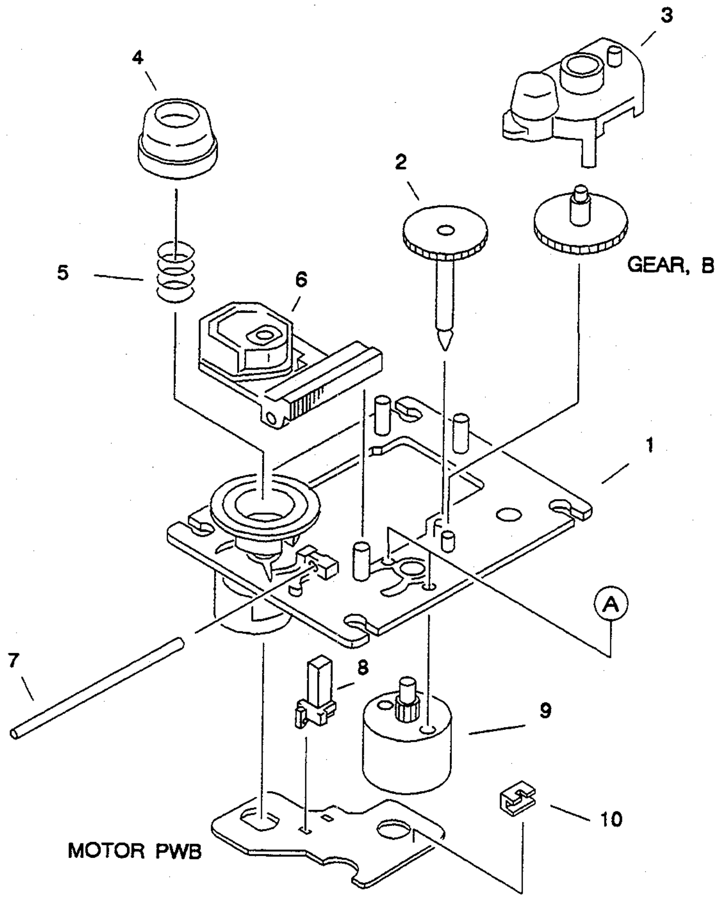
DECK MECHANISM EXPLODED VIEW 2/2



DECK MECHANISM PARTS LIST 2/2

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	82-ZM1-255-110	0E	SPR-E, LVR DIR
2	82-ZM1-221-110	0E	GEAR, CAM
3	82-ZM1-227-010	0E	LVR, TRIG
4	82-ZM1-224-010	0E	LVR, FR
5	82-ZM1-265-010	0E	SPR-E, TRIG
6	82-ZM1-277-010	0E	SPR-C, PLAY
7	82-ZM1-223-010	0E	GEAR, PLAY
8	82-ZM1-256-010	0E	SPR-T, FR
9	82-ZM1-220-010	0E	GEAR, IDLER
10	80-ZM6-217-010	0E	RING MAGNET 2
11	82-ZM1-216-110	0E	GEAR, REEL
12	82-ZM1-276-010	0E	SPR-C, FR
13	82-ZM1-225-010	0E	GEAR, FR
14	82-ZM1-226-010	0E	GEAR, REW
15	82-ZM1-228-110	1B	SLIP DISK ASSY
16	82-ZM1-261-110	0E	BELT, FR
17	82-ZM3-209-010	1B	FLY-WHL ASSY, R2 (DECK 1)
17	82-ZM1-237-010	1B	FLY-WHL ASSY, R (DECK 2)
18	82-ZM3-207-010	1B	FLY-WHL ASSY, L2 (DECK 1)
18	82-ZM1-234-010	1B	FLY-WHL ASSY, L (DECK 2)
19	82-ZM3-206-010	0E	BELT, R
20	82-ZM1-245-010	0E	HLDR, IC
21	82-ZM3-201-010	1A	HLDR, MC
22	82-ZM3-202-010	0E	PULLEY, MOT 2M
23	82-ZM1-288-010	0E	SH, 1.63-3.2-0.5 SLT
24	80-ZM6-243-010	0E	SH, 1.75-3.6-0.5 SLT
25	80-ZM6-230-010	0E	SH, BELT
26	86-575-242-010	0E	CUSH-G, DIA 3.7-9-3.2
27	86-575-361-010	0E	CUSH-G, 6-8-0.8
28	82-ZM3-205-010	0E	BELT, L
29	82-ZM3-204-010	0E	PULLEY COUPLER
A	86-575-243-010	0E	S-SCRW, MOTOR
B	87-067-178-019	0E	VTT+2.6-3
C	87-067-932-019	0E	PW, 2.15-6.8-0.5
D	87-067-972-019	0E	PW, 1.05-3-0.25 SLT

CD MECHANISM EXPLODED VIEW 1/1


3
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GEAR, B
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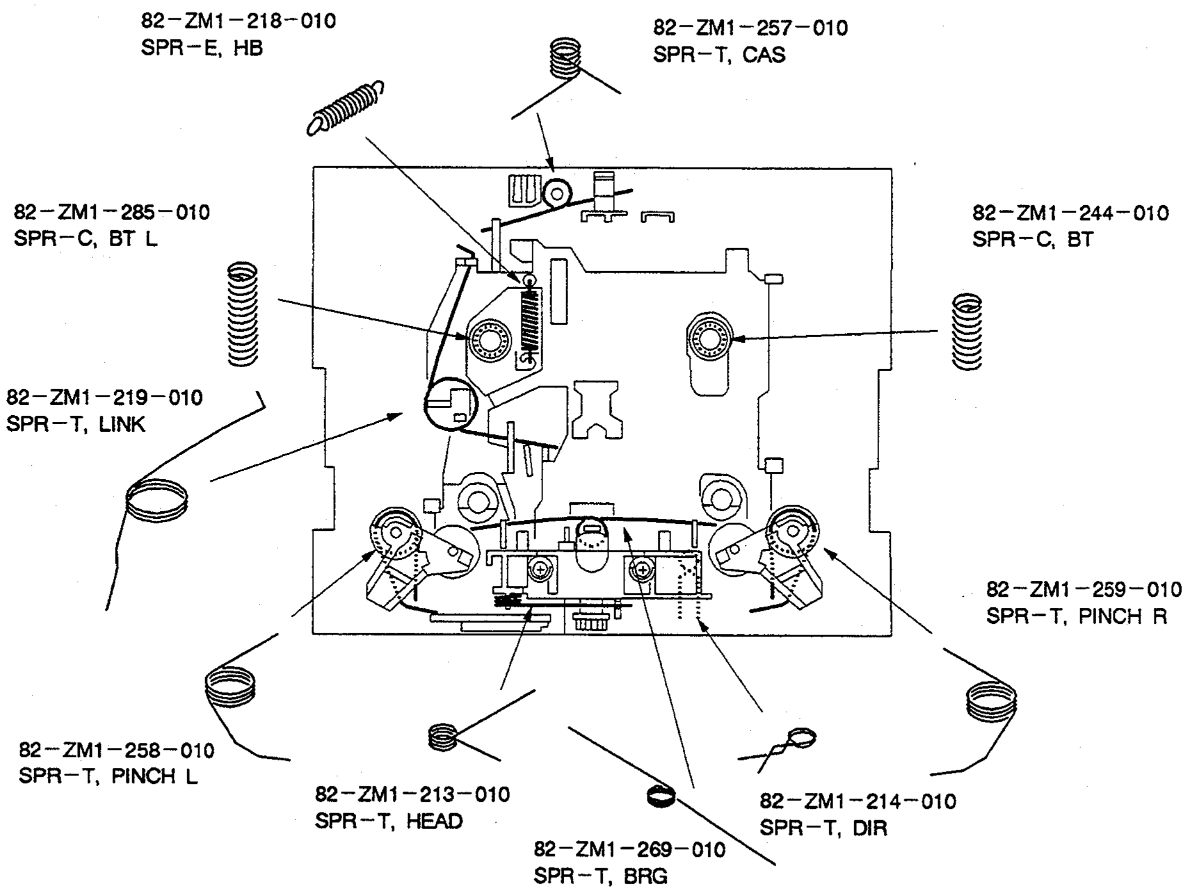
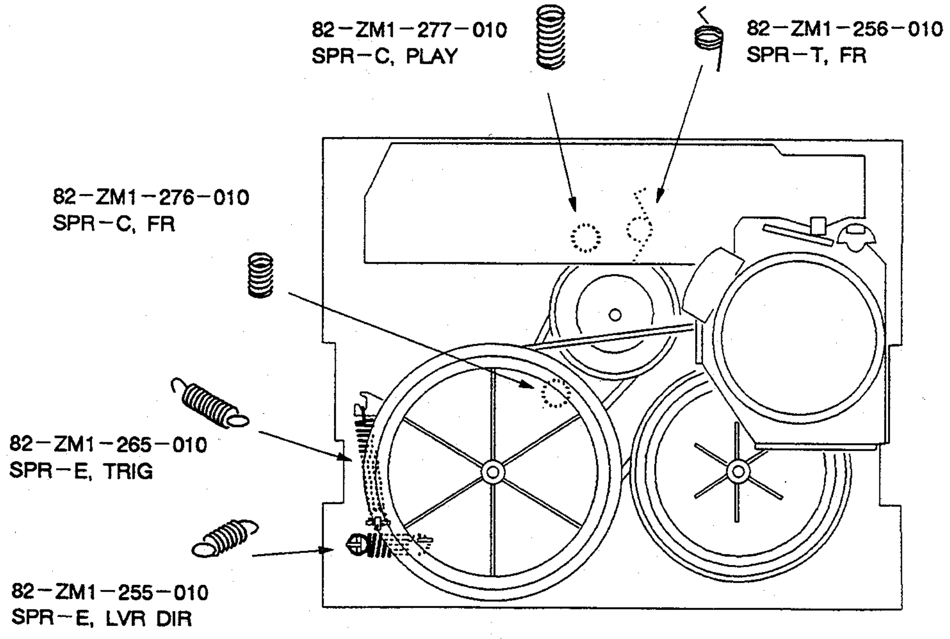
MOTOR PWB

CD MECHANISM PARTS LIST 1/1

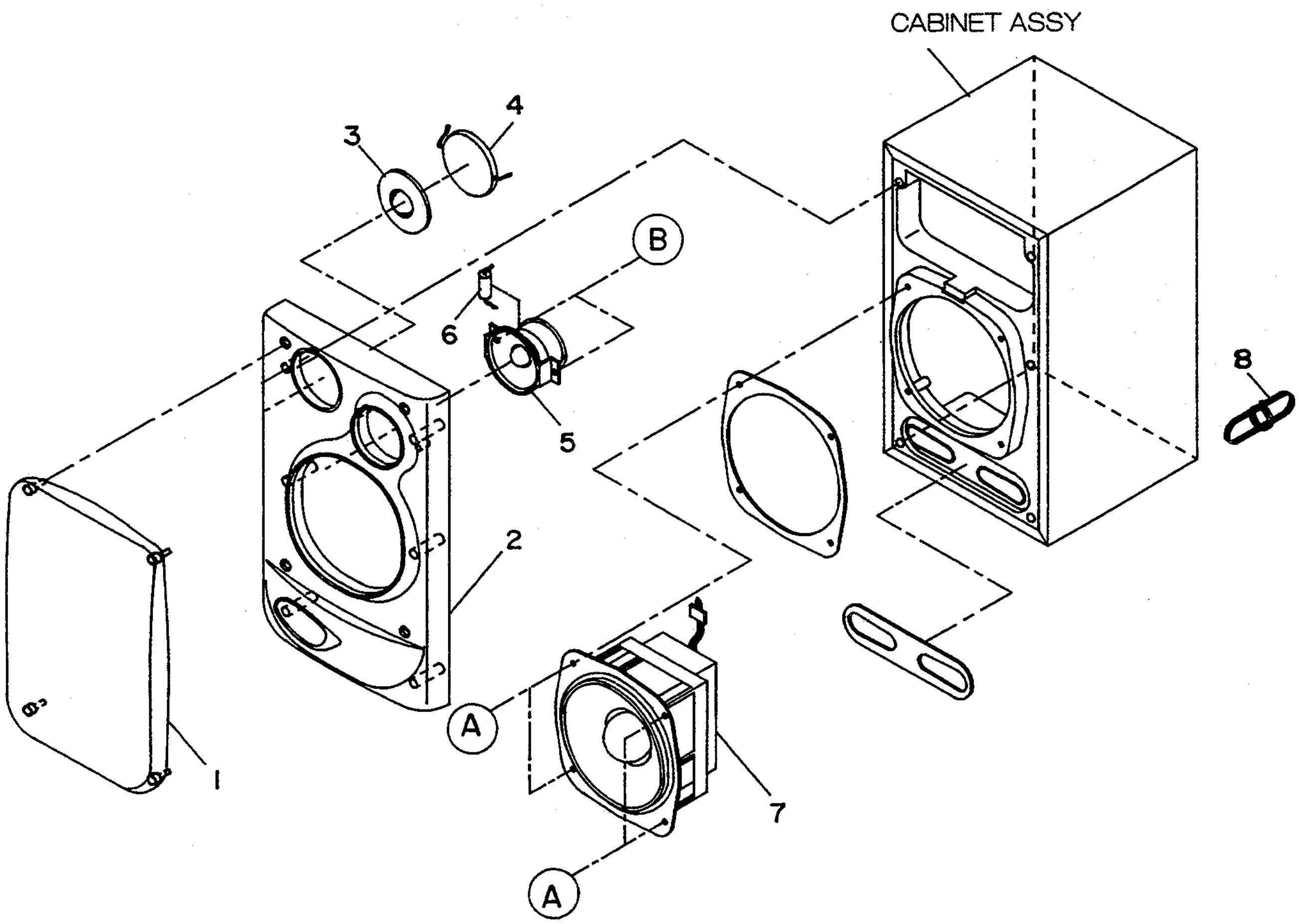
REF. NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
1	9X-262-513-310	2C	T.T CHASS ASSY W/MOTOR
2	92-625-188-020	-	GEAR A
3	92-625-544-010	-	COVER
4	92-625-187-010	1B	RING, CENTER
5	92-625-191-010	1B	SPRING COMPRESSION
6	98-848-127-110	-	PICK UP KSS-210A
7	94-917-565-010	1D	SHAFT SLED
8	91-572-085-110	1B	LEAF SW (LIMIT)
9	9X-262-513-210	2M	SLED MOTOR ASSY
10	91-564-722-110	1B	CONNECTOR 6P
A	87-261-032-210	0E	V+2-3

SPRING APPLICATION POSITION


82-ZM1-218-010
SPR-E, HB
82-ZM1-257-010
SPR-T, CAS
82-ZM1-285-010
SPR-C, BT L
82-ZM1-244-010
SPR-C, BT
82-ZM1-219-010
SPR-T, LINK
82-ZM1-259-010
SPR-T, PINCH R
82-ZM1-258-010
SPR-T, PINCH L
82-ZM1-213-010
SPR-T, HEAD
82-ZM1-214-010
SPR-T, DIR
82-ZM1-269-010
SPR-T, BRG


82-ZM1-277-010
SPR-C, PLAY
82-ZM1-256-010
SPR-T, FR
82-ZM1-276-010
SPR-C, FR
82-ZM1-265-010
SPR-E, TRIG
82-ZM1-255-010
SPR-E, LVR DIR

SPEAKER EXPLODED VIEW



SPEAKER PARTS LIST

DESCRIPTIONで判断できない物は “REFERENCE NAME LIST” を参照してください。
If can’t understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	82-NS5-006-010	2B	GRILL FRAME ASSY
2	82-NS5-001-010		PANEL, FRONT R〈HD, HE, LH, HR〉
2	82-NS5-002-010		PANEL, FRONT L〈HD, HE, LH, HR〉
2	82-NS5-013-010	2M	PANEL, FRONT R〈D, E, K, Z〉
2	82-NS5-014-010	2M	PANEL, FRONT L〈D, E, K, Z〉
2	82-NS5-015-010		PANEL, FRONT R〈U〉
2	82-NS5-016-010		PANEL, FRONT L〈U〉
3	82-NS5-010-010	--	DIAPHRAGM
4	82-MSE-610-010	1C	CERAMIC
5	82-NS5-604-010	2P	SPEAKER, TWEETER
6	87-010-006-010	0E	CAP, E 2.7μF
7	82-NS5-602-010	2E	SPEAKER, WOOFER
8	83-096-614-010	1D	CORD, SPEAKER
A	87-343-172-010	0E	UT, +4-12
B	87-342-097-010	0E	UT, +3-12

ACCESSORIES／PACKAGE LIST

DESCRIPTIONで判断できない物は “REFERENCE NAME LIST” を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
1	82-NF5-901-110	--	IB, D(D)
2	82-NF5-906-019		IB, U(U)
3	82-NF5-907-019		IB, H(HE, LH, HR)
4	82-NF5-909-010		IB, HD(HD)
5	82-NF5-905-018		IB, E(E, K, Z)
6	81-748-632-010	--	FEEDER ANT FMN(EXCEPT Z)
7	87-043-106-010		FM WIRE ANT(Z)
8	82-NF5-637-019	--	RC, RC-TN500(D)
9	82-NF5-638-019		RC, RC-TN500 (EX)(EXCEPT D)
10	87-006-225-010	--	AM LOOP ANT NC2(EXCEPT E, K)
11	87-006-226-019		AM LOOP ANT CON2(E, K)
12	87-042-062-019		PLUG ADPTR, S-16115(HE, HR)
13	87-009-724-019		PLUG ADPTR, IR39(LH, HD)
14	87-041-072-019		MIC, DM-SH18YJN(Z)

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER
ｻｰｼﾞｻﾌﾞﾚｯｻ	SERGESUPPRESSOR
ｾﾗｺﾝ	CAP, CERA

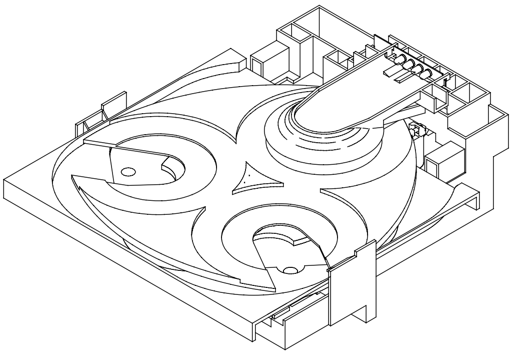
MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BAT, CONTACT ASSY	BATTERY CONTACT ASSY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
KNOB, VOL REV	KNOB, VOLUME REV
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTORL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOADING MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
SW	SWITCH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL
ｼﾞｸｱｰﾑ	ARM, SHAFT
ｼﾞｸｶﾞｲﾄﾞ	GUIDE, SHAFT
ｽﾄﾗｯﾌﾟ	STRAP
ﾋﾝｼﾞ	HINGE

aiwa

aiwa SERVICE

4ZG-1



CD MECHANISM

SERVICE MANUAL

- BASIC CD MECHANISM:3ZG-2 E1
- TYPE: English

BASIC NAME	DERIVATION NAME					
4ZG-1	V	O	S1	D	SH	

■ This Service Manual has various derivation.Derivation name is indicated by the Service Manual for each model.

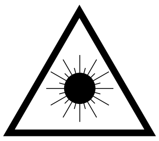
S/M Code No. 09-985-249-80T

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynling laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

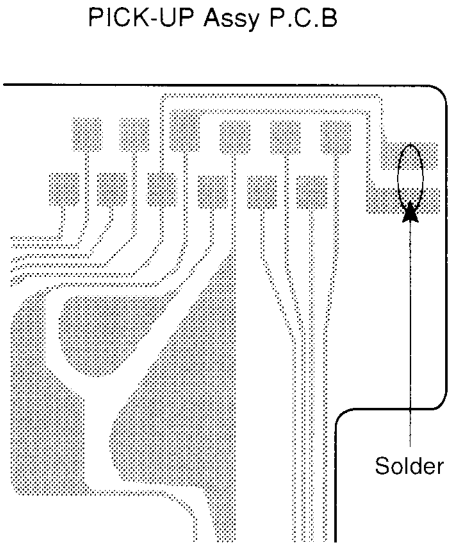
This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

Precaution to replace Optical block (KSS-213F)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.



This is the SERVICE MANUAL for the BASIC CD MECHANISM of BASIC NAME: 4ZG-1. This BASIC NAME includes the following models as shown under the SUFFIX name: DERIVATION NAME. Please use this manual with the separate SERVICE MANUAL for DERIVATION NAME.

BASIC CD MECHANISM: 4ZG-1 VOS1DSH
SUFFIX
(DERIVATION NAME)
BASIC NAME: 4ZG-1

BASIC NAME	DERIVATION NAME							
4ZG-1	V	O	S1	D	SH	—	—	—

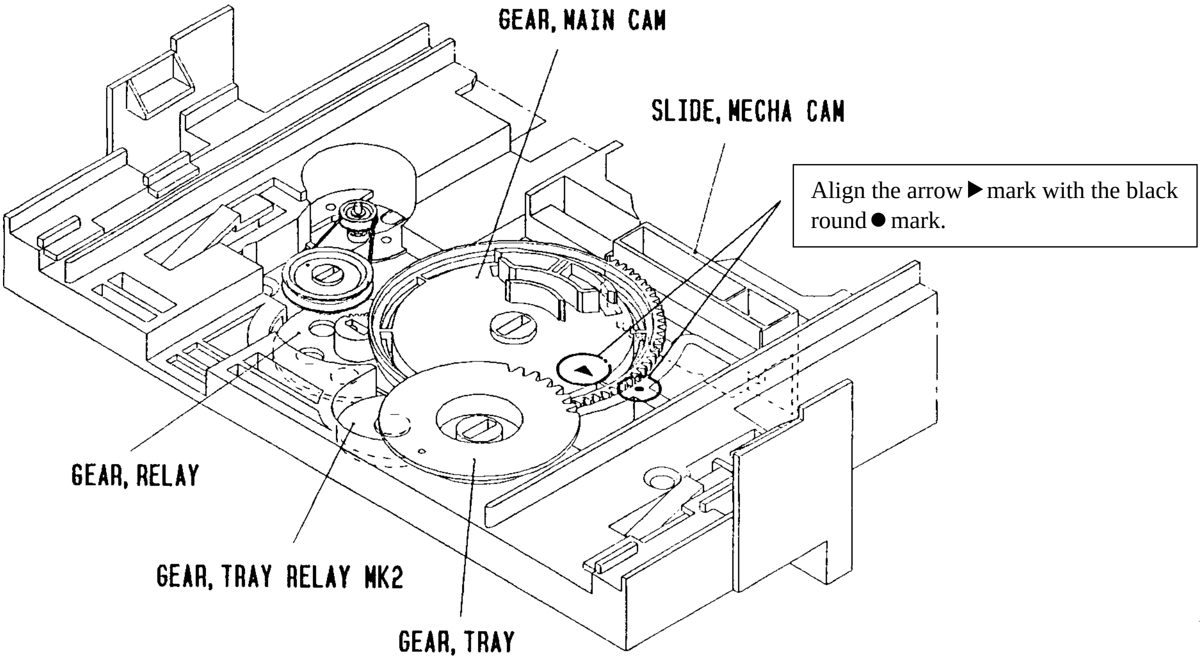
DERIVATION NAME

V: VIDEO OUT
O: On screen display
S1: THE 1st SONY IC MODEL
D: Digital output function
SH: Pick up equipped with shutter

How to Adjust the Rotating Phase of the Gear, Main Cam

1) Push down the hooking catch of the CHAS. MECH, and remove the TRAY.
2) Align the arrow mark of the Gear, Main Cam with the black round mark of the CHAS, MECHA as shown below.
3) Confirm that the Slide, Mech Cam is located in the right position, then insert the TRAY gently.

Caution: If the rotating phase of the Gear, Main Cam is incorrectly adjusted, the chucking operation and tray movement will have malfunction.


GEAR, MAIN CAM
SLIDE, MECHA CAM
GEAR, RELAY
GEAR, TRAY RELAY MK2
GEAR, TRAY

Align the arrow ▶ mark with the black round ● mark.

ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-547-010		C-IC,CXA1992AR
	87-A20-919-040		C-IC,BA5915FP
	87-A20-917-010		C-IC,CXD2540Q-1/2
	84-ZG1-697-010		C-IC,UPD78016FGC-549
	87-017-825-010		IC,GP1F32T
	87-017-760-080		IC,M51943BML
	87-A20-602-040		C-IC,M5291FP
	87-A20-925-040		C-IC,BA05FP
	87-A20-905-040		C-IC,BA033FP
	87-001-873-010		IC,LB1644
	87-A20-920-010		C-IC,CL680-D1
	87-A20-921-040		C-IC,SN74LVU04APW
	87-A20-656-040		C-IC,MB81V4260S-60/70PFTN
	84-ZG1-695-040		C-IC,LH5V2RN1
	87-A20-975-040		C-IC,SN74LV74APW
	87-A20-974-040		C-IC,LC74781M-9017
	87-A20-918-040		C-IC,SM5878AM
TRANSISTOR			
	87-026-463-080		TR,2SA933S (0.3W)
	87-026-237-080		CHIP-TR,DTC124XK
	89-327-125-080		CHIP TR,2SC2712GR
	87-026-231-080		CHIP-TRANSISTER,DTA124XK
	87-A30-117-010		TR,2SA1357
	89-111-625-080		TR,2SA1162 (0.15W)
	87-026-580-080		C-TR,DTA123JK
	87-026-470-080		TR,HN1C03F (0.3W)
DIODE			
	87-020-027-080		CHIP-DIODE 1SS184
	87-017-024-040		C-DIODE,DA204K
	87-A40-180-040		C-DIODE,SB07-015C
	87-A40-384-080		C-ZENER,UDZ3.3B
3CD C.B			
C101	87-010-182-080		C-CAP,S 2200P-50 B
C102	87-016-669-080		C-CAP,S 0.1-25 K B
C103	87-016-669-080		C-CAP,S 0.1-25 K B
C104	87-016-669-080		C-CAP,S 0.1-25 K B
C105	87-010-404-040		CAP,E 4.7-50 SME
C106	87-016-369-080		C-CAP,S 0.033-25 B K
C107	87-010-197-080		CAP, CHIP 0.01 DM
C108	87-010-401-040		CAP,E 1-50 SME
C109	87-010-382-040		CAP,E 22-25 SME
C110	87-010-213-080		C-CAP,S 0.015-50 B
C111	87-010-263-040		CAP,E 100-10
C112	87-010-197-080		CAP, CHIP 0.01 DM
C113	87-016-369-080		C-CAP,S 0.033-25 B K
C114	87-016-369-080		C-CAP,S 0.033-25 B K
C115	87-016-369-080		C-CAP,S 0.033-25 B K
C116	87-012-158-080		C-CAP,S 390P-50 CH
C117	87-012-154-080		C-CAP,S 150P-50 CH
C118	87-010-494-040		CAP,E 1-50 GAS
C119	87-010-152-080		C-CAP,S 8P-50 CH
C120	87-010-992-080		C-CAP,S 0.047-25 B
C121	87-010-992-080		C-CAP,S 0.047-25 B
C123	87-016-669-080		C-CAP,S 0.1-25 K B
C125	87-010-198-080		CAP, CHIP 0.022
C126	87-016-669-080		C-CAP,S 0.1-25 K B
C127	87-010-555-040		CAP,E 100-10 GAS
C130	87-010-555-040		CAP,E 100-10 GAS
C131	87-010-555-040		CAP,E 100-10 GAS
C132	87-010-178-080		CHIP CAP 1000P
C133	87-010-555-040		CAP,E 100-10 GAS
C134	87-010-196-080		CHIP CAPACITOR,0.1-25
C135	87-010-196-080		CHIP CAPACITOR,0.1-25
C136	87-010-196-080		CHIP CAPACITOR,0.1-25
C137	87-010-196-080		CHIP CAPACITOR,0.1-25
C138	87-010-182-080		C-CAP,S 2200P-50 B
C139	87-010-197-080		CAP, CHIP 0.01 DM
C140	87-010-112-040		CAP,E 100-16
C141	87-010-196-080		CHIP CAPACITOR,0.1-25
C142	87-010-196-080		CHIP CAPACITOR,0.1-25
C143	87-010-213-080		C-CAP,S 0.015-50 B
C151	87-010-263-040		CAP,E 100-10
C152	87-010-197-080		CAP, CHIP 0.01 DM
C153	87-A10-893-040		CAP,E 220-10 M PW
C154	87-010-197-080		CAP, CHIP 0.01 DM
C155	87-010-184-080		CHIP CAPACITOR 3300P(K)
C156	87-010-992-080		C-CAP,S 0.047-25 B
C157	87-010-992-080		C-CAP,S 0.047-25 B
C158	87-012-156-080		C-CAP,S 220P-50 CH
C159	87-016-526-080		C-CAP,S 0.47-16 BK
C160	87-010-314-080		C-CAP,S 22P-50V
C161	87-010-182-080		C-CAP,S 2200P-50 B
C162	87-010-178-080		CHIP CAP 1000P
C201	87-016-669-080		C-CAP,S 0.1-25 K B
C204	87-010-197-080		CAP, CHIP 0.01 DM
C205	87-010-379-040		CAP,E 22-16 M SME
C206	87-010-322-080		C-CAP,S 100P-50 CH
C207	87-010-322-080		C-CAP,S 100P-50 CH
C208	87-010-322-080		C-CAP,S 100P-50 CH
C209	87-010-322-080		C-CAP,S 100P-50 CH
C210	87-016-669-080		C-CAP,S 0.1-25 K B
C211	87-010-263-040		CAP,E 100-10
C213	87-010-190-080		S CHIP F 0.01
C214	87-010-196-080		CHIP CAPACITOR,0.1-25
C301	87-016-251-040		CAP,E 220-16 SMG
C302	87-012-140-080		CAP 470P
C303	87-010-178-080		CHIP CAP 1000P
C304	87-010-384-040		CAP,E 100-25 SME
C305	87-010-982-040		CAP,E 33-25 GAS
C306	87-010-112-040		CAP,E 100-16
C307	87-010-196-080		CHIP CAPACITOR,0.1-25
C308	87-010-263-040		CAP,E 100-10
C309	87-010-196-080		CHIP CAPACITOR,0.1-25
C310	87-010-263-040		CAP,E 100-10
C311	87-010-196-080		CHIP CAPACITOR,0.1-25
C312	87-010-178-080		CHIP CAP 1000P
C320	87-010-196-080		CHIP CAPACITOR,0.1-25
C401	87-016-044-040		CAP,E 100-16 GAS
C402	87-010-190-080		S CHIP F 0.01
C403	87-010-190-080		S CHIP F 0.01
C501	87-010-197-080		CAP, CHIP 0.01 DM
C502	87-010-197-080		CAP, CHIP 0.01 DM
C503	87-010-197-080		CAP, CHIP 0.01 DM
C504	87-010-154-080		CAP CHIP 10P
C505	87-010-154-080		CAP CHIP 10P
C506	87-010-197-080		CAP, CHIP 0.01 DM
C508	87-010-263-040		CAP,E 100-10
C509	87-016-669-080		C-CAP,S 0.1-25 K B
C510	87-010-263-040		CAP,E 100-10
C511	87-016-669-080		C-CAP,S 0.1-25 K B
C512	87-010-197-080		CAP, CHIP 0.01 DM
C513	87-010-197-080		CAP, CHIP 0.01 DM
C514	87-010-197-080		CAP, CHIP 0.01 DM
C518	87-010-322-080		C-CAP,S 100P-50 CH
C519	87-012-145-080		CAP, CHIP S 270P CH
C520	87-012-157-080		C-CAP,S 330P-50 CH
C521	87-012-154-080		C-CAP,S 150P-50 CH
C522	87-010-371-080		CAP, ELECT 470-6.3V
C523	87-010-197-080		CAP, CHIP 0.01 DM
C524	87-010-197-080		CAP, CHIP 0.01 DM
C525	87-010-197-080		CAP, CHIP 0.01 DM
C526	87-010-197-080		CAP, CHIP 0.01 DM

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C527	87-010-197-080		CAP, CHIP 0.01 DM
C528	87-010-197-080		CAP, CHIP 0.01 DM
C529	87-010-197-080		CAP, CHIP 0.01 DM
C530	87-010-197-080		CAP, CHIP 0.01 DM
C531	87-010-197-080		CAP, CHIP 0.01 DM
C532	87-010-374-040		CAP,E 47-10
C533	87-010-197-080		CAP, CHIP 0.01 DM
C534	87-010-555-040		CAP,E 100-10 GAS
C535	87-010-197-080		CAP, CHIP 0.01 DM
C536	87-010-078-040		CAP,E 47-6.3 5L
C537	87-010-197-080		CAP, CHIP 0.01 DM
C538	87-010-196-080		CHIP CAPACITOR,0.1-25
C539	87-016-669-080		C-CAP,S 0.1-25 K B
C540	87-010-078-040		CAP,E 47-6.3 5L
C541	87-010-197-080		CAP, CHIP 0.01 DM
C542	87-010-318-080		C-CAP,S 47P-50 CH
C544	87-010-197-080		CAP, CHIP 0.01 DM
C546	87-010-197-080		CAP, CHIP 0.01 DM
C549	87-010-494-040		CAP,E 1-50 GAS
C550	87-010-196-080		CHIP CAPACITOR,0.1-25
C551	87-012-153-080		C-CAP,S 120P-50 CH
C552	87-016-526-080		C-CAP,S 0.47-16 BK
C554	87-010-197-080		CAP, CHIP 0.01 DM
C556	87-010-378-040		CAP,E 10-16
C557	87-010-316-080		C-CAP,S 33P-50 CH
C558	87-010-315-080		C-CAP,S 27P-50 CH
C560	87-010-197-080		CAP, CHIP 0.01 DM
C601	87-010-197-080		CAP, CHIP 0.01 DM
C602	87-010-197-080		CAP, CHIP 0.01 DM
C603	87-010-112-040		CAP,E 100-16
C604	87-010-196-080		CHIP CAPACITOR,0.1-25
C605	87-010-197-080		CAP, CHIP 0.01 DM
C606	87-010-197-080		CAP, CHIP 0.01 DM
C607	87-010-313-080		CAP, CHIP 18P
C608	87-010-313-080		CAP, CHIP 18P
C609	87-010-178-080		CHIP CAP 1000P
C610	87-010-178-080		CHIP CAP 1000P
C611	87-010-178-080		CHIP CAP 1000P
C612	87-010-178-080		CHIP CAP 1000P
C613	87-010-403-040		CAP,E 3.3-50 SME
C614	87-010-403-040		CAP,E 3.3-50 SME
C615	87-010-318-080		C-CAP,S 47P-50 CH
C616	87-010-318-080		C-CAP,S 47P-50 CH
CN101	87-A60-424-010		CONN,16P V TOC-B
CN102	87-099-199-010		CONN,6P 6216 H
CN401	87-099-212-010		CONN,5P 6216 V
CN403	87-099-030-010		CONN,13P 6216H
J501	87-009-502-010		JACK,PIN 1P Y EARTH
L101	87-005-196-080		COIL,10UH
L301	87-A50-095-010		COIL,68UH RCR875D
L302	87-005-426-080		COIL,3.3UH K FLR50
L502	87-005-204-080		COIL,47UH
L503	87-005-189-080		COIL 2.7UH
L504	87-005-187-080		COIL,1.8UH
L505	87-005-204-080		COIL,47UH

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
L506	87-005-204-080		COIL,47UH
L507	87-005-204-080		COIL,47UH
L508	87-005-817-080		C-COIL, 33UH J FLC32
M401	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
R130	87-022-364-080		C-RES,S 82K-1/10W F
R131	87-022-364-080		C-RES,S 82K-1/10W F
R132	87-022-364-080		C-RES,S 82K-1/10W F
R133	87-022-364-080		C-RES,S 82K-1/10W F
R134	87-022-364-080		C-RES,S 82K-1/10W F
R135	87-022-364-080		C-RES,S 82K-1/10W F
R507	87-A00-408-080		C-RES,S 2K-1/10W D
S201	87-A90-162-010		SW,SL 1-1-3 SSSU
S401	87-036-109-010		PUSH SWITCH
S402	87-036-109-010		PUSH SWITCH
W1	84-ZG1-673-010		F-CABLE,5P 1.25 210MM BLACK N
W2	85-NFT-611-110		FF-CABLE 16P-1.0
W3	84-ZG1-630-010		CABLE FFC 6P-1.25
X201	87-A70-124-080		VIB,CER 8.0MHZ
X501	87-A70-125-080		VIB,XTAL 27MHZ 50PPM
X601	87-030-270-080		VIB,XTAL 16.9344MHZ

LED C.B

LED401	87-070-200-080		LED,SLP636C-81-S-T1
LED402	87-017-350-080		LED,SEL1550CM
LED403	87-017-350-080		LED,SEL1550CM
LED404	87-070-200-080		LED,SLP636C-81-S-T1

T-T C.B

C401	87-018-214-080		CAP TC U 0.1-50F
CON401	86-NFZ-675-010		CONN,5P H 6216-11H
PS401	87-026-573-010		IC,GP1S53V

DRIVE C.B

CN3	87-009-349-010		CONN,6P H WHT PH
M20	87-045-358-010		MOT,RF-310TA 43
M21	87-045-356-010		MOT,RF-310TA 30
SW1	87-A90-042-010		SW,LEAF MSW-17310MVPO

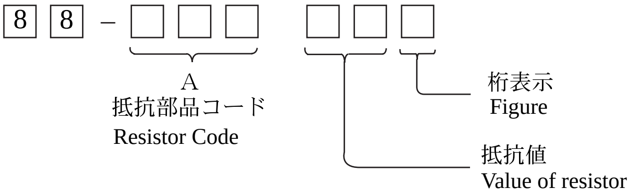
CD MOTOR C.B

CN4	87-099-210-010		CONN,5P H BLK 6216
M1	87-045-305-010		MOT,RF-500TB
SW1	87-035-110-010		SW,MICRO SPPB62
SW2	87-035-110-010		SW,MICRO SPPB62

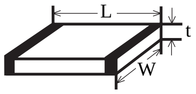
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

○ チップ抵抗部品コード / CHIP RESISTOR PART CODE

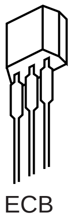
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding


8 8 – □□□ □□□
A
抵抗部品コード
Resistor Code
桁表示
Figure
抵抗値
Value of resistor

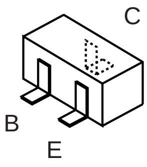
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法 / Diamensions (mm)				抵抗コード : A Resistor Code : A
				外形 / Form	L	W	t	
1/16W	1608	5%	CJ		1.6	0.8	0.45	108
1/10W	2125	5%	CJ		2	1.25	0.45	118
1/8W	3216	5%	CJ		3.2	1.6	0.55	128

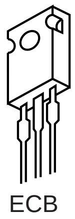
TRANSISTOR ILLUSTRATION



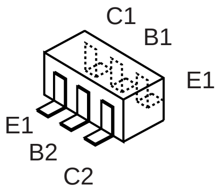
2SA933S



2SA1162
2SC2712
DTA123JK
DTA124XK
DTC124XK

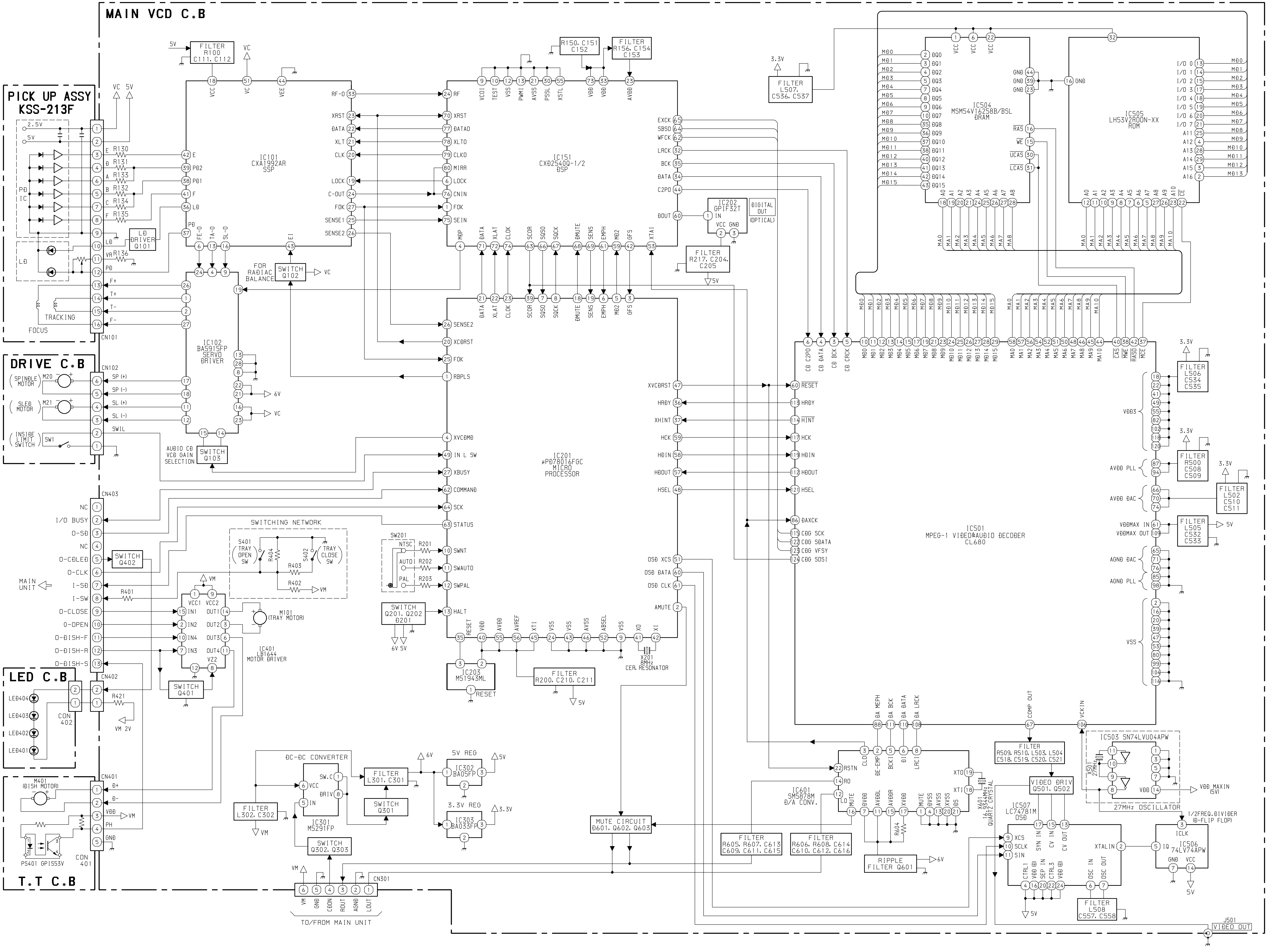


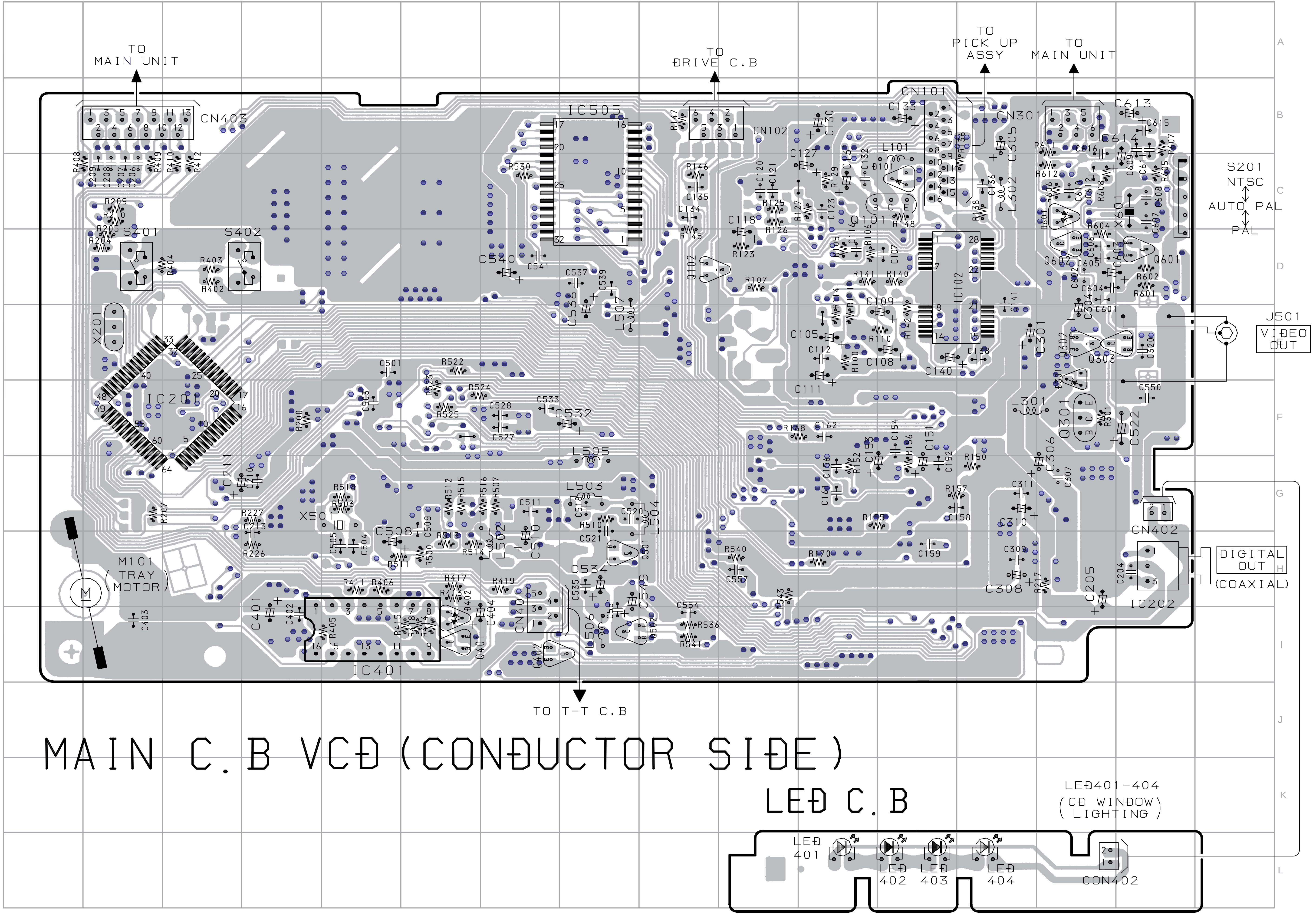
2SA1357


C1
B1
E1
E1
B2
C2

HN1C03F

BLOCK DIAGRAM


MAIN VCD C.B
PICK UP ASSY
KSS-213F
DRIVE C.B
LED C.B
T.T C.B
CN101
CN102
CN403
CN402
CN401
CN301
FILTER
R100
C111, C112
IC101
CXA1992AR
SSP
IC102
BA5915FP
SERVO
DRIVER
IC151
CXD2540Q-1/2
DSP
R150, C151
C152
FILTER
R156, C154
C153
IC202
GP1F32T
DIGITAL
OUT
(OPTICAL)
FILTER
R217, C204,
C205
IC201
μPD78016FGC
MICRO
PROCESSOR
IC203
M51943ML
FILTER
R200, C210, C211
X201
8MHz
CER. RESONATOR
SWITCHING NETWORK
S401
TRAY
OPEN
SW
S402
TRAY
CLOSE
SW
SW201
NTSC
AUTO
PAL
SWITCH
Q201, Q202
D201
IC401
LB1644
MOTOR DRIVER
M101
(TRAY MOTOR)
SWITCH
Q401
SWITCH
Q402
SWITCH
Q102
FOR
RADIAC
BALANCE
SWITCH
Q103
AUDIO CD
VCD GAIN
SELECTION
LD
DRIVER
Q101
TRACKING
FOCUS
SPINDLE
MOTOR
SLED
MOTOR
INSIDE
LIMIT
SWITCH
MAIN
UNIT
M401
(DISH MOTOR)
PS401 GP1S53V
CON
401
CON
402
LED404
LED403
LED402
LED401
DC-DC CONVERTER
IC301
M5291FP
FILTER
L301, C301
SWITCH
Q301
FILTER
L302, C302
SWITCH
Q302, Q303
5V REG
IC302
BA05FP
3.3V REG
IC303
BA033FP
MUTE CIRCUIT
D601, Q602, Q603
TO/FROM MAIN UNIT
FILTER
L507,
C536, C537
IC504
MSM54V16258B/BSL
DRAM
IC505
LH53V2R00N-XX
ROM
IC501
MPEG-1 VIDEO&AUDIO DECODER
CL680
FILTER
L506
C534
C535
FILTER
R500
C508
C509
FILTER
L502
C510
C511
FILTER
L505
C532
C533
VDD3
AVDD PLL
AVDD DAC
VDDMAX IN
VDDMAX OUT
AGND DAC
AGND PLL
VSS
IC601
SM5878M
D/A CONV.
X601
16.9344MHz
QUARTZ CRYSTAL
FILTER
R509, R510, L503, L504
C518, C519, C520, C521
VIDEO DRIV
Q501, Q502
IC503 SN74LVU04APW
X501
27MHz
27MHz OSCILLATOR
IC507
LC74781M
OSD
IC506
74LV74APW
1/2FREQ.DIVIDER
(D-FLIP FLOP)
FILTER
R605, R607, C613
C609, C611, C615
FILTER
R606, R608, C614
C610, C612, C616
RIPPLE
FILTER Q601
FILTER
L508
C557, C558
J501
VIDEO OUT
VDD MAXIN
(5V)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TO
MAIN UNIT
TO
DRIVE C.B
TO
PICK UP
ASSY
TO
MAIN UNIT
CN403
IC505
CN102
CN101
CN301
C613
S201
NTSC
AUTO PAL
PAL
J501
VIDEO
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DIGITAL
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(COAXIAL)
CN402
IC202
IC102
IC201
IC401
S401
S402
X201
X501
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MOTOR
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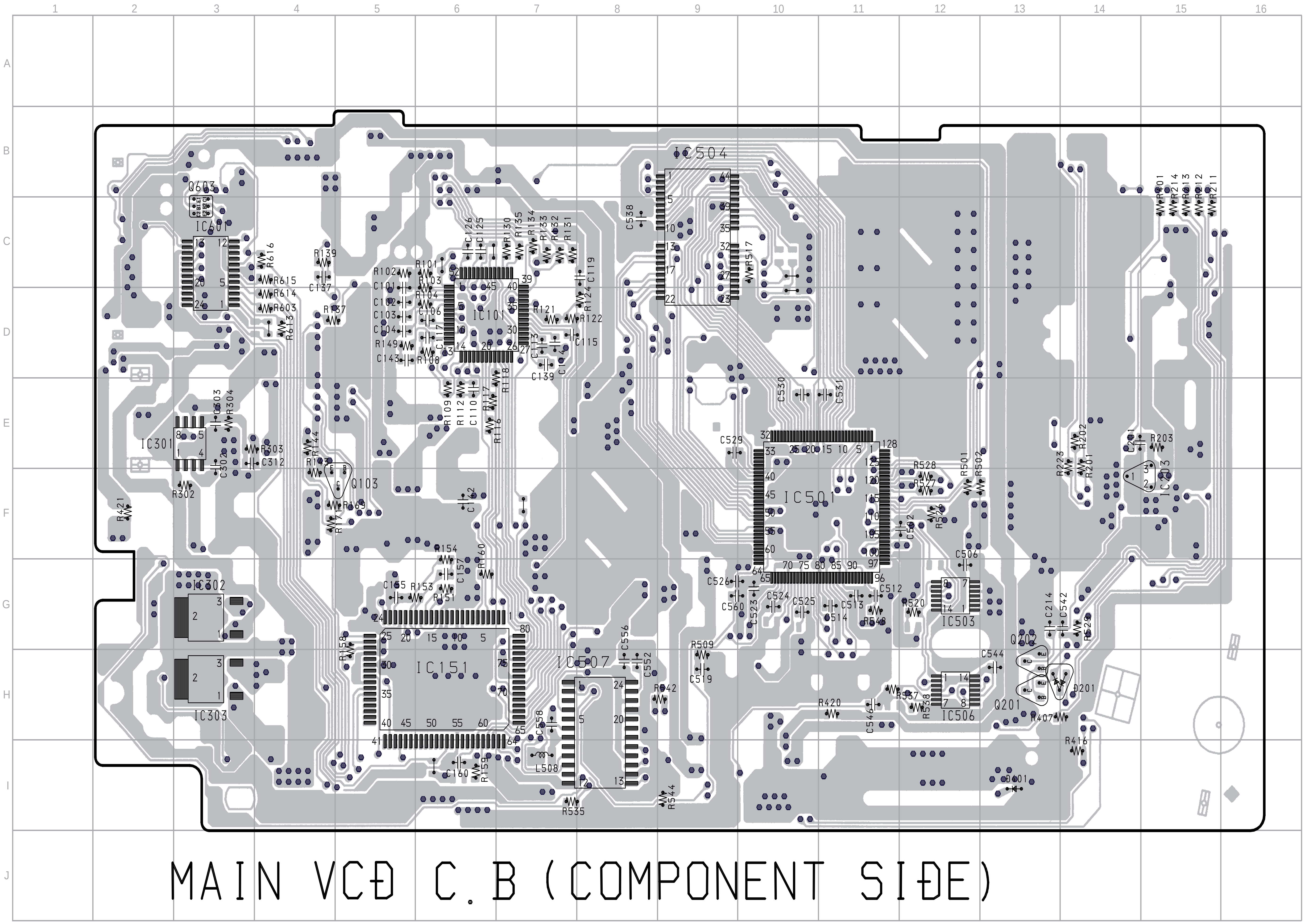
C401
C403
C205
C522
C550
C308
C310
C311
CN401
TO T-T C.B
LED401-404
(CD WINDOW
LIGHTING)
LED
401
LED
402
LED
403
LED
404
CON402

MAIN C.B VCD (CONDUCTOR SIDE)

LED C.B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Q603
IC601
R616
R615
R614
R603
R613
R139
C137
R137
R102
C101
C102
C103
C104
R149
C143
R101
R103
R104
C106
C117
R108
IC101
C126
C125
R130
R135
R134
R133
R632
R131
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R124
R121
R122
C113
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R116
R118
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IC504
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R144
R143
Q103
R163
R171
R421
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R153
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IC303
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IC151
C160
R159
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IC507
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Q202
Q201
D201
R407
R416
D601
C214
C542
R629
R223
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C201
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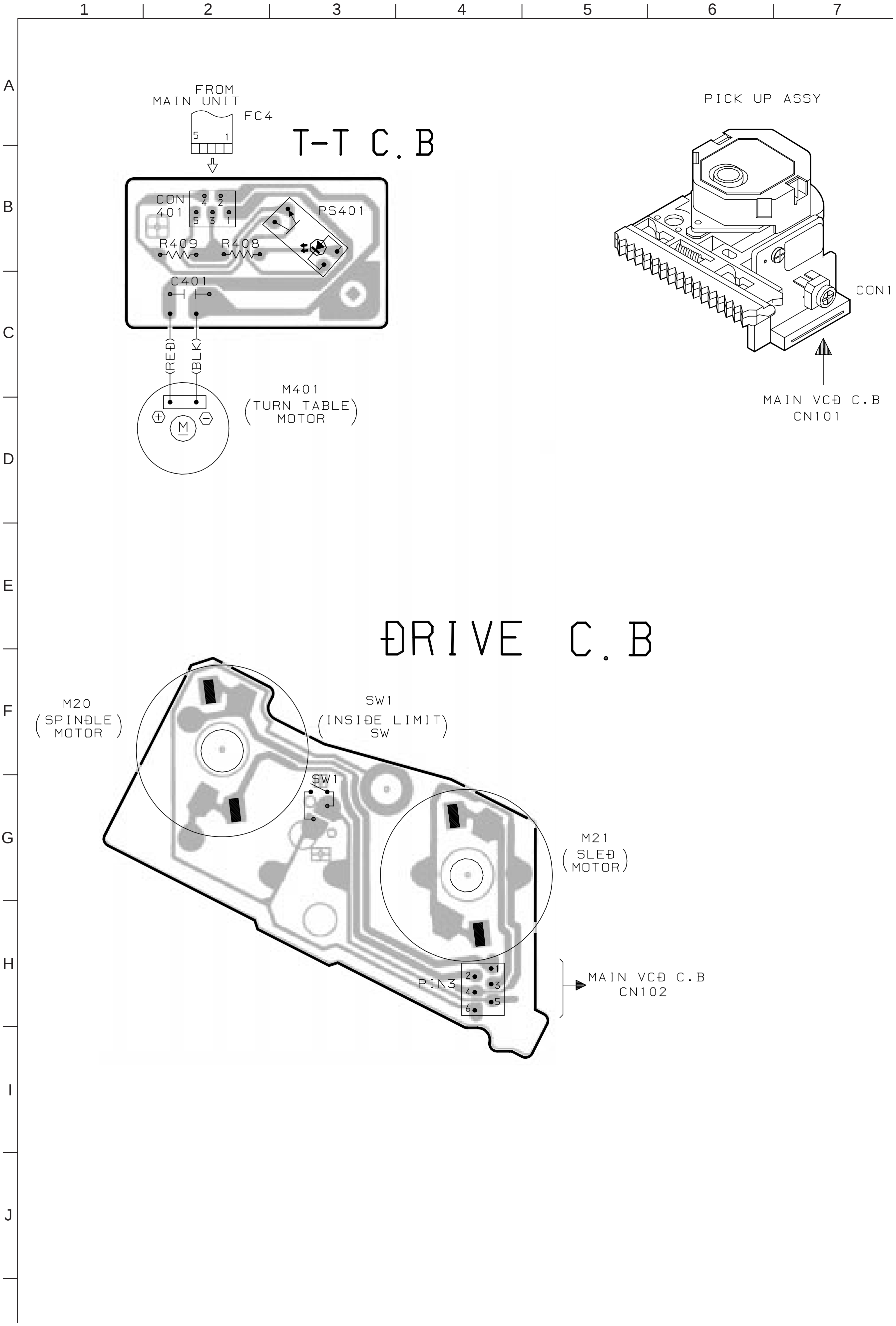
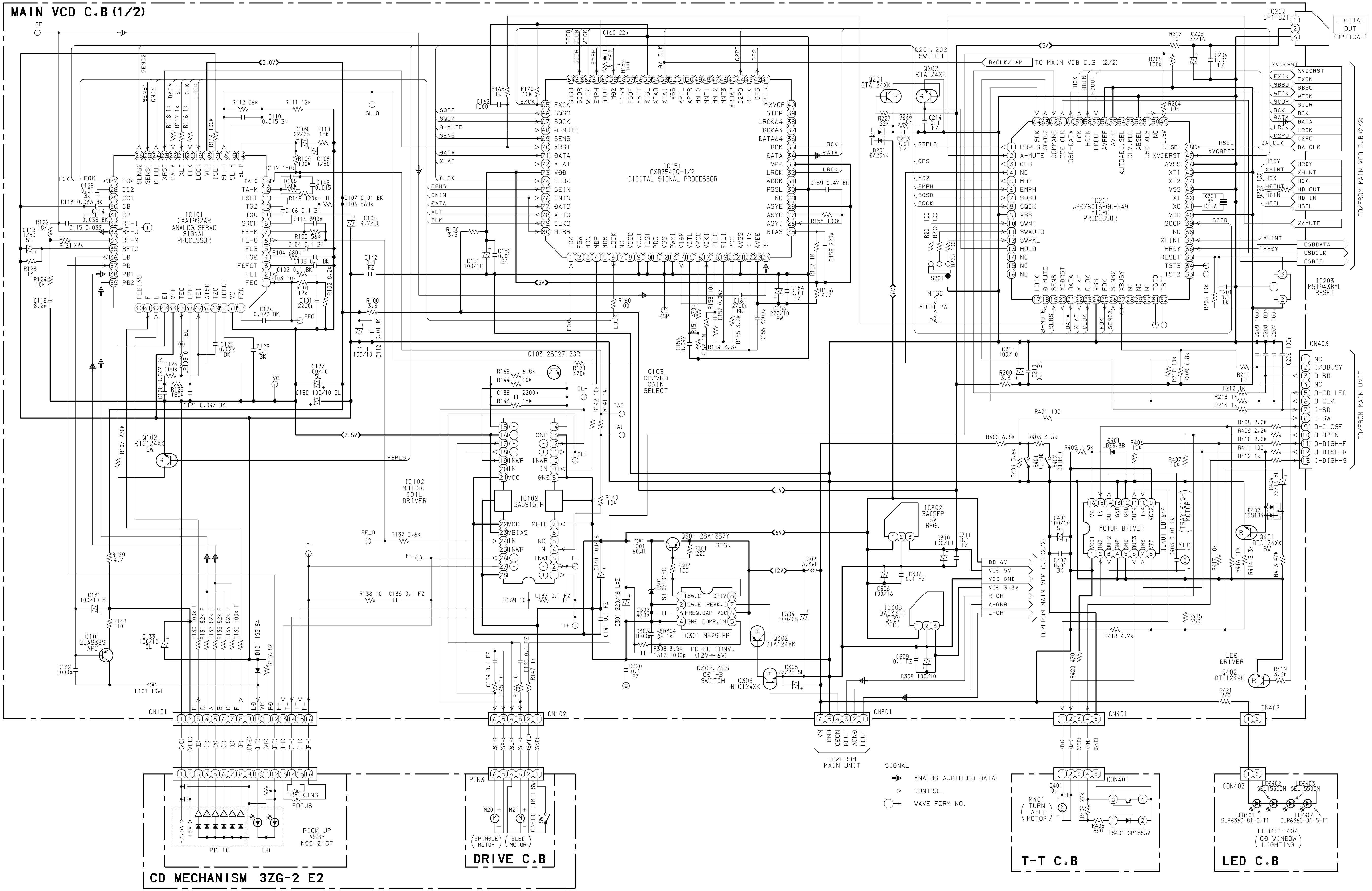
Q203
R201
R214
R213
R212
R211

MAIN VCD C.B (COMPONENT SIDE)

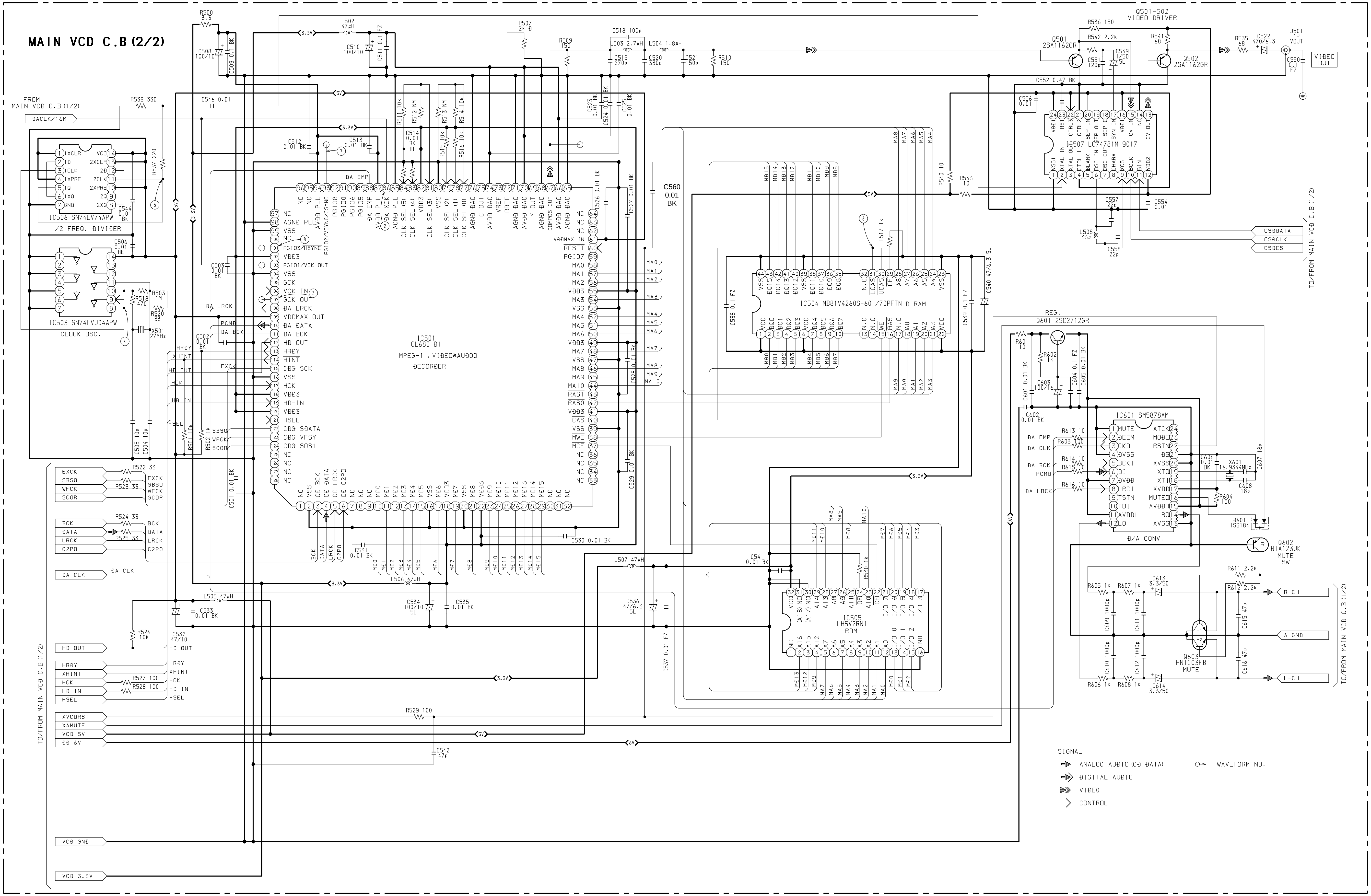
WIRING-3


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
FROM
MAIN UNIT
FC4
5
1
T-T C.B
CON
401
4 2
5 3 1
PS401
R409
R408
C401
(RED)
(BLK)
M401
(TURN TABLE
MOTOR)
M
PICK UP ASSY
CON1
MAIN VCD C.B
CN101
DRIVE C.B
M20
(SPINDLE
MOTOR)
SW1
(INSIDE LIMIT
SW)
SW1
M21
(SLED
MOTOR)
PIN3
1
2
3
4
5
6
MAIN VCD C.B
CN102

SCHEMATIC DIAGRAM-1


MAIN VCD C.B (1/2)
IC101 CXA1992AR ANALOG SERVO SIGNAL PROCESSOR
IC151 CXD2540Q-1/2 DIGITAL SIGNAL PROCESSOR
IC201 μPD78016FGC-549 MICRO PROCESSOR
IC202 GP1F32T
DIGITAL OUT (OPTICAL)
IC203 M51943BML RESET
IC102 BA5915FP
IC102 MOTOR COIL DRIVER
Q103 2SC2712GR
Q103 CD/VCD GAIN SELECT
Q101 2SA933S APC
Q102 DTC124XK SW
Q201 DTA124XK
Q202 DTA124XK
Q201, 202 SWITCH
IC301 M5291FP
DC-DC CONV. (12V→6V)
Q301 2SA1357Y REG.
Q302 DTA124XK
Q303 DTC124XK
Q302, 303 CD +B SWITCH
IC302 BA05FP 5V REG.
IC303 BA033FP 3.3V REG.
IC401 LB1644 MOTOR DRIVER
TRAY (DISH) MOTOR
Q401 DTC124XK SW
Q402 DTC124XK
LED DRIVER
TO MAIN VCD C.B (2/2)
TO/FROM MAIN VCD C.B (2/2)
TO/FROM MAIN UNIT
CN101
CN102
CN301
CN401
CN402
CN403
CD MECHANISM 3ZG-2 E2
PICK UP ASSY KSS-213F
TRACKING
FOCUS
PD IC
LD
DRIVE C.B
(SPINDLE) MOTOR
(SLED) MOTOR
(INSIDE LIMIT SW)
T-T C.B
M401 TURN TABLE MOTOR
PS401 GP1S53V
CON401
LED C.B
CON402
LED402 SEL1550CM
LED403 SEL1550CM
LED401 SLP636C-81-5-T1
LED404 SLP636C-81-5-T1
LED401-404 (CD WINDOW LIGHTING)
SIGNAL
ANALOG AUDIO (CD DATA)
CONTROL
WAVE FORM NO.

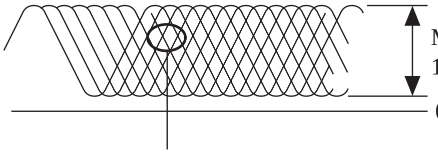
SCHEMATIC DIAGRAM-2



MAIN VCD C.B (2/2)
FROM MAIN VCD C.B (1/2)
DACLK/16M
IC506 SN74LV74APW
1/2 FREQ. DIVIDER
IC503 SN74LVU04APW
CLOCK OSC.
X501 27MHz
IC501 CL680-01
MPEG-1 . VIDEO&AUDIO DECORDER
IC504 MB81V4260S-60 /70PFTN D RAM
IC505 LH5V2RN1 ROM
IC507 LC74781M-9017
Q501-502 VIDEO DRIVER
Q501 2SA1162GR
Q502 2SA1162GR
J501 1P VOUT
VIDEO OUT
REG. Q601 2SC2712GR
IC601 SM5878AM
D/A CONV.
X601 16.9344MHz
D601 1SS184
Q602 DTA123JK MUTE SW
Q603 HN1C03FB MUTE
R-CH
A-GND
L-CH
OSDDATA
OSDCLK
OSDCS
TO/FROM MAIN VCD C.B (1/2)
EXCK
SBSO
WFCK
SCOR
BCK
DATA
LRCK
C2PO
DA CLK
HD OUT
HRDY
XHINT
HCK
HD IN
HSEL
XVCDRST
XAMUTE
VCD 5V
DD 6V
VCD GND
VCD 3.3V
C560 0.01 BK
SIGNAL
ANALOG AUDIO (CD DATA)
DIGITAL AUDIO
VIDEO
CONTROL
WAVEFORM NO.

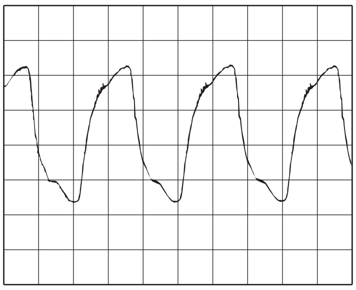
WAVE FORM

① IC101 Pin ㉝ (RF-O) VOLT/DIV: 200mV
TIME/DIV: 0.5µS

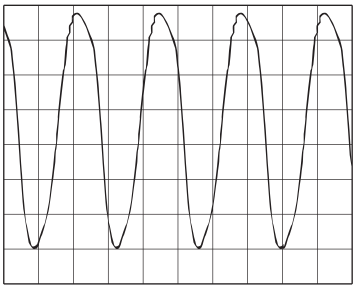


EYE PATTERN
must be CLEAR and MAX

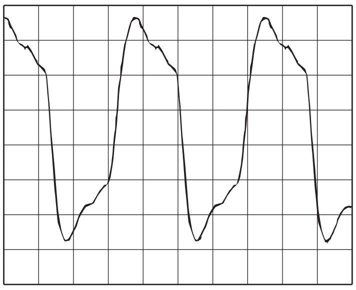
② IC501 Pin (86) DA XCK VOLT/DIV: 1V
16.93MHz TIME/DIV: 20nS



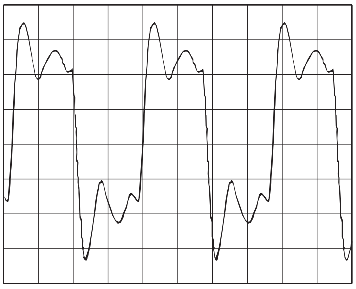
③ IC501 Pin (107) GCK OUT VOLT/DIV: 1V
42.3MHz TIME/DIV: 10nS



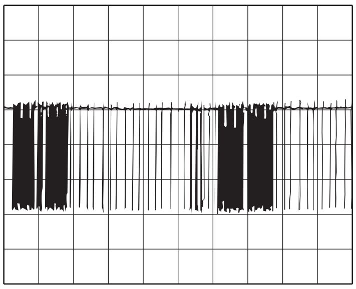
④ IC503 Pin ⑧ 33 VCK VOLT/DIV: 1V
27MHz±1.35kHz TIME/DIV: 10nS



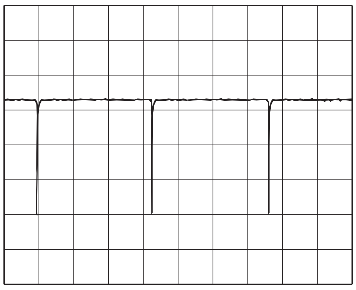
⑤ IC506 Pin ⑪ OSD CLK VOLT/DIV: 1V
13.5MHz±675Hz TIME/DIV: 20nS



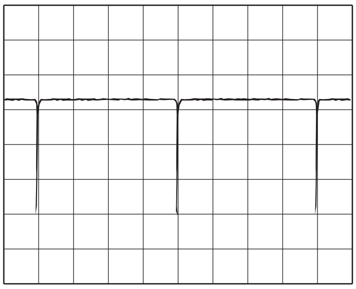
⑥ IC504 Pin ㉚ $\overline{\text{UCAS}}$ VOLT/DIV: 1V
(Pin ㉛ $\overline{\text{LCAS}}$) TIME/DIV: 2µS



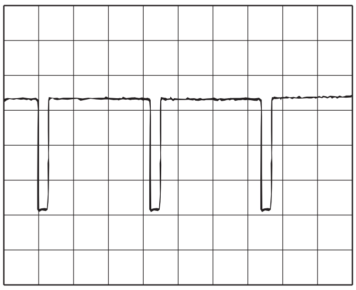
⑦ IC501 Pin (93) $\overline{\text{VSync}}$ VOLT/DIV: 1V
NTSC TIME/DIV: 5mS



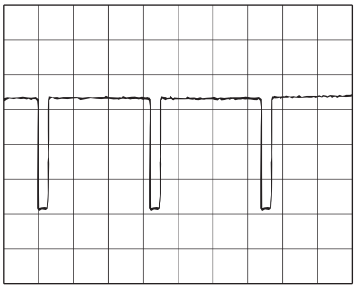
⑧ IC501 Pin (93) $\overline{\text{VSync}}$ VOLT/DIV: 1V
PAL TIME/DIV: 5mS



⑧ IC501 Pin (101) $\overline{\text{HSync}}$ VOLT/DIV: 1V
PAL TIME/DIV: 20µS



IC501 Pin (101) $\overline{\text{HSync}}$ VOLT/DIV: 1V
NTSC TIME/DIV: 20µS



IC DESCRIPTION
IC, CXA1992AR

Pin No.	Pin Name	I/O	Description
1	FEO	O	Output terminal for focus error amplifier. Internally connected to window comparator input for bias condition.
2	FEI	I	Input terminal for focus error.
3	FDFCT	I	Capacitor connection terminal for time constant used when there is defect.
4	FGD	I	This pin is connected to GND via capacitor when high frequency gain of the focus servo is attenuated.
5	FLB	I	This is a pin where the time constant is externally connected to raise the low frequency gain of the focus servo.
6	FE_O	O	Focus drive output.
7	FEM	I	Focus amplifier inverted input pin.
8	SRCH	I	This is a pin where the time constant is externally connected to generate the focus search waveform.
9	TGU	I	This is a pin where the selection time constant is externally connected to set the tracking servo the high frequency gain.
10	TG2	I	This is a pin where the selection time constant is externally connected to set the tracking high frequency gain.
11	FSET	I	Pin for setting peak of the phase compensator of the focus tracking.
12	TA_M	I	Tracking amplifier inverted input pin.
13	TA_O	O	Tracking drive output.
14	SL_P	I	Sled amplifier non-inverted input pin.
15	SL_M	I	Sled amplifier inverted input pin.
16	SL_O	O	Sled drive output.
17	ISET	I	The current which determines height of the focus search, track jump and sled kick is input with external resistance connected.
18	Vcc	I	Power supply.
19	LOCK	I	“L” setting starts sled disorder-prevention circuit. (Not pull-up resistance)
20	CLK	I	Clock input for serial data transfer from CPU. (No pull-up resistance)
21	XLT	I	Latch input from CPU. (No pull-up resistance)
22	DATA	I	Serial data input from CPU. (No pull-up resistance)
23	XRST	I	Reset system at “L” setting. (No pull-up resistance)
24	C_OUT	O	Signal output for track number counting.
25	SENS1	O	FZC, DFCT1, TZC, BALH, TGH, FOH, or ATSC is output depending on the command from CPU.
26	SENS2	O	DFCT2, MIRR, BALL, TGL or FOL is output depending on the command from CPU.
27	FOK	O	Output terminal for focus OK comparator.
28	CC2	I	Input pin where the DEFECT bottom hold output is capacitance coupled.
29	CC1	O	DEFECT bottom-hold output terminal. Internally connected to interruption comparator input.
30	CB	I	Connection terminal for DEFECT bottom-hold capacitor.
31	CP	I	Connection terminal for MIRR hold-capacitor. Anti-reverse input terminal for MIRR comparator.

Pin No.	Pin Name	I/O	Description
32	RF_I	I	Input terminal by capacity combination of RF summing amplifier.
33	RF_O	O	Output terminal of RF summing amplifier. Checkpoint of Eye pattern.
34	RF_M	I	Anti-reverse input terminal for RF summing amplifier. The gain of RF amplifier is decided by the connection resistance between RF_M and RFO terminals.
35	RFTC	I	This is a pin where the selection time constant is externally connected to control the RF level.
36	LD	O	APC amplifier output terminal.
37	PD	I	APC amplifier input terminal.
38, 39	PD1, PD2	I	RFI-V amplifier inverted input pin. These pins are connected to the A+C and B+C pins of the optical pickup, receiving by currents input.
40	FEBIAS	I/O	Bias adjustment pin of the focus error amplifier.
41, 42	F, E	I	F and EIV amplifier inverted input pins. These pins are connected to the F and E of the optical pickup, receiving by current input.
43	EI	—	Gain adjustment pin of the I-V amplifier E. (When not in use of BAL automatic adjustment)
44	VEE	—	GND connection pin.
45	TEO	O	Output terminal for tacking-error amplifier. Output E-F signal.
46	LPFI	I	BAL adjustment comparator input pin. (Input through LPF from TEO)
47	TEI	I	Input terminal for tracking error.
48	ATSC	I	Window-comparator input terminal for detecting ATSC.
49	TZC	I	Input terminal for tracking-zero cross comparator.
50	TDFCT	I	Capacitor connection pin for the time constant used when there is defect.
51	VC	O	Output terminal for DC voltage reduced to half of VCC+VEE.
52	FZC	I	Input terminal for focus-zero cross comparator.

IC, CXD2540Q

Pin No.	Pin Name	I/O	Description
1	FOK	I	Focus OK input. Used for SENS output and the servo auto sequencer.
2	FSW	O	Spindle motor output filter switching output.
3	MON	O	Spindle motor on/off control output.
4	MDP	O	Spindle motor servo control.
5	MDS	O	
6	LOCK	O	High, when sampled value of GFS at 460Hz is high. Low, when sampled value of GFS at 460Hz is low by 8 times successively.
7	NC		
8	VCOO	O	Analog EFM PLL oscillation circuit output.
9	VCOI	I	Analog EFM PLL oscillation circuit input. fLOCK=8.6436MHz.
10	TEST	I	TEST pin.
11	PDO	O	Analog EFM PLL charge pump output.
12	VSS		GND.
13	PWMI	I	Spindle motor external control input.
14	V16M	O	VCO2 oscillation output for the wide-band EFM PLL.
15	VCTL	I	VCO2 control voltage input for the wide-band EFM PLL.
16	VPCO	O	Wide-band EFM PLL charge pump output.
17	VCKI	I	VCO2 oscillation input for the wide-band EFM PLL.
18	FILO	O	Multiplier PLL (slave=digital PLL) filter output.
19	FILI	I	Multiplier PLL filter input.
20	PCO	O	Multiplier PLL charge pump output.
21	AVSS		Analog GND.
22	CLTV	I	Multiplier VCO1 control voltage input.
23	AVDD		Analog power supply (5V).
24	RF	I	EFM signal input.
25	BIAS	I	Constant current input of the asymmetry circuit.
26	ASYI	I	Asymmetry comparator voltage input.
27	ASYO	O	EFM full-swing output.
28	ASYE	I	Low: asymmetry circuit off; high: asymmetry circuit on.
29	NC		
30	PSSL	I	Audio data output mode switching input. Low: serial output; high: parallel output.
31	WDCK	O	D/A interface for 48-bit slot. Word clock f=2Fs.
32	LRCK	O	D/A interface for 48-bit slot. LR clock f=Fs.
33	VDD		Power supply (5V).
34	DA16	O	DA16 (MSB) output when PSSL=1. 48-bit slot serial data (two’s complement, MSB first) when PSSL=0.
35	DA15	O	DA15 output when PSSL=1. 48-bit slot bit clock when PSSL=0.
36	DA14	O	DA14 output when PSSL=1. 64-bit slot serial data (two’s complement, LSB first) when PSSL=0.
37	DA13	O	DA13 output when PSSL=1. 64-bit slot bit clock when PSSL=0.
38	DA12	O	DA12 output when PSSL=1. 64-bit slot LR clock when PSSL=0.

Pin No.	Pin Name	I/O	Description
39	DA11	O	DA11 output when PSSL=1. GTOP output when PSSL=0.
40	DA10	O	DA10 output when PSSL=1. XUGF output when PSSL=0.
41	DA09	O	DA09 output when PSSL=1. XPLCK output when PSSL=0.
42	DA08	O	DA08 output when PSSL=1. GFS output when PSSL=0.
43	DA07	O	DA07 output when PSSL=1. RFCK output when PSSL=0.
44	DA06	O	DA06 output when PSSL=1. C2PO output when PSSL=0.
45	DA05	O	DA05 output when PSSL=1. XRAOF output when PSSL=0.
46	DA04	O	DA04 output when PSSL=1. MNT3 output when PSSL=0.
47	DA03	O	DA03 output when PSSL=1. MNT2 output when PSSL=0.
48	DA02	O	DA02 output when PSSL=1. MNT1 output when PSSL=0.
49	DA01	O	DA01 output when PSSL=1. MNT0 output when PSSL=0.
50	APTR	O	Aperture compensation control output. This pin outputs a high signal when the right channel is used.
51	APTL	O	Aperture compensation control output. This pin outputs a high signal when the left channel is used.
52	VSS		GND.
53	XTAI	I	Crystal oscillation circuit input.
54	XTAO	O	Crystal oscillation circuit output.
55	XTSL	I	Crystal selector input.
56	FSTT	O	2/3 frequency divider output for Pins 53 and 54.
57	FSOF	O	1/4 frequency divider output for Pins 53 and 54.
58	C16M	O	16.9344MHz output. (V16M output in CLV-W and CAV-W modes)
59	MD2	I	Digital-out on/off control. High: on; low: off
60	DOUT	O	Digital-out output.
61	EMPH	O	Outputs a high signal when the playback disc has emphasis, and a low signal when there is no emphasis.
62	WFCK	I	WFCK (write frame clock) output.
63	SCOR	O	Outputs a high signal when either subcode sync S0 or S1 is detected.
64	SBSO	O	Sub P to W serial output.
65	EXCK	I	SBSO readout clock input.
66	SQSO	O	Sub Q 80-bit and PCM peak, level metter and internal status outputs.
67	SQCK	I	SQSO readout clock input.
68	MUTE	I	High: mute; low: release
69	SENS	—	SENS output to CPU.
70	XRST	I	System reset. Reset when low.
71	DATA	O	Serial data input from CPU.
72	XLAT	O	Latch input from CPU. Serial data is latched at the falling edge.
73	VDD		Power supply (5V).
74	CLOK	O	Serial data transfer clock input from CPU.
75	SEIN	I	SENS input from SSP.
76	CNIN	I	Track jump count signal input.

Pin No.	Pin Name	I/O	Description
77	DATO	O	Serial data output to SSP.
78	XLTO	O	Serial data latch output to SSP. Latched at the falling edge.
79	CLKO	O	Serial data transfer clock output to SSP.
80	MIRR	I	Mirror signal input. Used when the number of tracks is 128 or more for the 2N-track jump and M track move of the auto sequencer.

Notes)

- The 64-bit slot is an LSB first, two’s complement output, and the 48-bit slot is an MSB first, two’s complement output.
- GTOP is used to monitor the frame sync protection status. (High: sync protection window open.)
- XUGF is the negative pulse for the frame sync obtained from the EFM signal. It is the signal before sync protection.
- XPLCK is the inverse of the EFM PLL clock. The PLL is designed so that the falling edge and the EFM signal transition point coincide.
- GFS goes high when the frame sync and the insertion protection timing match.
- RFCK is derived from the crystal accuracy, and has a cycle of 136µ.
- C2PO represents the data error status.
- XRAOF is generated when the 32K RAM exceeds the ±28F jitter margin.

IC, CL680

Pin No.	Pin Name	I/O	Description
1	NC	—	No connection.
2	VSS	—	GND.
3	CD BCK	I	Bit clock input from CD DSP.
4	CD DATA	I	Data input from CD DSP.
5	CD LRCK	I	LRCK input from CD DSP.
6	CD C2PO	I	C2 pointer input from CD DSP.
7-9	NC	—	No connection.
10-15	MD0-MD5	I/O	DRAM/ROM interface. (DATA)
16	VSS	—	Ground.
17	MD6	I/O	DRAM/ROM interface. (DATA)
18	VDD3	—	Power supply 3.3V.
19	MD7	I/O	DRAM/ROM interface. (DATA)
20	VSS	—	Ground.
21	MD8	I/O	DRAM/ROM interface. (DATA)
22	VDD3	—	Power supply 3.3V.
23-29	MD9-MD15	I/O	DRAM/ROM interface. (DATA)
30-36	NC	—	No connection.
37	$\overline{\text{MCE}}$	—	ROM chip enable.
38	$\overline{\text{MWE}}$	O	DRAM write enable.
39	VSS	—	Ground.
40	$\overline{\text{CAS}}$	O	DRAM/ROM interface.
41	VDD3	—	Power supply 3.3V.
42	$\overline{\text{RASO}}$	O	DRAM/ROM interface.
43	$\overline{\text{RASI}}$	O	
44-46	MA10-MA8	O	DRAM/ROM interface. (Address)
47	VSS	—	Ground.
48	MA7	O	DRAM/ROM interface. (Address)
49	VDD3	—	Power supply 3.3V.
50-52	MA6-MA4	O	DRAM/ROM interface. (Address)
53	VSS	—	Ground.
54	MA3	O	DRAM/ROM interface. (Address)
55	VDD3	—	Power supply 3.3V.
56-58	MA2-MA0	O	DRAM/ROM interface. (Address)
59	PGIO7	I/O	Programmable I/O.
60	$\overline{\text{RESET}}$	I	Reset input.
61	VDD MAX IN	—	Power supply - VDDMAX. (5.0V)
62-64	NC	—	No connection.
65	AGND DAC	—	Analog ground.
66	A DAC	—	Analog power supply (DAC) : 3.3V.
67	COMP OUT	O	Composite out.
68	AGND DAC	—	Analog ground.

Pin No.	Pin Name	I/O	Description
69	Y OUT	O	Video signal “Y” OUT.
70	AVDD DAC	—	Analog power supply (DAC) 3.3V.
71	AGND DAC	—	Analog ground.
72	R REF	I	Reference resistor input.
73	V REF	I	Voltage reference input.
74	AVDD DAC	—	Analog power supply (DAC) : 3.3V.
75	C OUT	O	Video signal “C” out.
76	AGND DAC	—	Analog ground.
77-79	CLK SEL0-2	I	Clock selection input.
80	VSS	—	Ground.
81	CLK SEL3	I	Clock selection input.
82	VDD3	—	Power supply 3.3V.
83, 84	CLK SEL4, 5	I	Clock selection input.
85	AGND PLL	—	Analog ground.
86	DA XCK	I	DA XCK (16.933MHz) input.
87	AVDD PLL	—	Analog power supply 3.3V.
88	DA EMP	O	DAC-emphasis output.
89, 90	PGIO5, O6	I/O	Programmable I/O.
91	PGIO0	I/O	
92	PGIO8	I/O	
93	$\overline{\text{VSYNC}}/\overline{\text{CSYNC}}$	O	$\overline{\text{VSYNC}}/\overline{\text{CSYNC}}$ output.
94	AVDD PLL	—	Analog power supply (PLL) 3.3V.
95	VID_DAC_CK	O	Video DAC clock.
96	PROC_CK	O	Processor clock.
97	AUD_XCK	O	Audio XCK.
98	AGND PLL	—	Analog ground.
99	VSS	—	Ground.
100	NC	—	No connection.
101	$\overline{\text{HSYNC}}$	O	$\overline{\text{HSYNC}}$ output.
102	VDD3	—	Power supply 3.3V.
103	VCK OUT	O	VCK out.
104	VSS	—	Ground.
105	GCK	I	Global clock signal input. (42.3MHz)
106	VCK	I	Video clock signal input. (27.0MHz)
107	GCK OUT	O	Global clock signal output. (27.0MHz)
108	DA LRCK	O	DAC-LRCK output.
109	VDD MAX OUT	—	Power supply (VDD MAX) : 5.0V.
110	DA DATA	O	DAC-PCM data output.
111	DA BCK	O	DAC-BIT clock output.
112	HD OUT	O	Micon interface. (Data out)
113	HRDY	O	Micon interface. (Host ready)

Pin No.	Pin Name	I/O	Description
114	$\overline{\text{HINT}}$	O	Micon interface. (Host interrupt)
115	CDG SCK	I	CD-G serial clock input.
116	VSS	—	Ground.
117	HCK	I	Micon interface. (Host clock)
118	VDD3	—	Power supply 3.3V.
119	HD IN	I	Micon interface. (Host data in)
120	VDD3	—	Power supply 3.3V.
121	HSEL	I	Micon interface. (Host select in)
122	CDG DATA	I	CD-G data input.
123	CDG VFSY	I	CD-G VFSY input.
124	CDG SOSI	I	CD-G SOSI input.
125	DSP-XCK	O	DSP-XCK output.
126-128	NC	—	No connection.

IC, LC74781M

Pin No.	Pin Name	I/O	Description
1	VSS1	—	GND connection terminal. (Digital ground terminal).
2	Xtal IN	I	External X’tal and capacitor for internal sync generator, or the external clock are connected to this terminal. (2fsc or 4fsc).
3	Xtal OUT	O	
4	CTRL1	I	Either the external clock input mode or the X’tal generator mode is selected by this selector terminal. L: X’tal generator mode, H: External clock input.
5	BLANK	O	Blank signal (character and the green ORed signal) is output from this terminal. (MODE 0: composite sync signal is output at H.) When reset ($\overline{\text{RST}}$ terminal = L), the X’tal clock signal is output. (It is not output when reset by the reset command).
6	OSC IN	I	External coil and capacitor for the character output dot clock generator are connected to this terminal.
7	OSC OUT	O	
8	CHARA	O	The character signal is output from this terminal. (MOD 0: when H, the external sync signal identification signal is output from this terminal. This output signal tells whether the external sync signal is present or not. When external sync signal is present, H is output.) When reset ($\overline{\text{RST}}$ terminal = L), the dot clock signal (LC oscillator) is output. (It is not output when reset by the reset command).
9	$\overline{\text{CS}}$	I	Enable signal for the serial data input is input to this terminal. The serial data input is enabled at L. Pull-up resistor is built-in. (Hysteresis input).
10	SCLK	I	Clock of the serial data input is input to this terminal. Pull-up resistor is built-in. (Hysteresis input).
11	SIN	I	Serial data input terminal. Pull-up resistor is built-in. (Hysteresis input).
12	VDD2	—	Power supply for the composite video signal level adjustment. (Analog power supply).
13	CV OUT	O	Composite video signal output terminal.
14	NC	—	Connected to GND or not connected.
15	CV IN	I	Composite video signal input terminal.
16	VDD1	—	Power supply (+5V digital power supply).
17	SYN IN	I	Video signal for the internal sync separator circuit is input to this terminal. (When the internal sync separator circuit is not used, the horizontal sync signal or composite sync signal is input to this terminal).
18	SEP C	—	Internal sync separator circuit bias voltage monitoring terminal.
19	SEP OUT	O	The composite sync output signal of the internal sync separator circuit is output from this terminal. (H: MOD 1. H: during internal sync mode. L: during external sync mode.) (When internal sync separator circuit is not used, the SYN IN input signal is output from this terminal).
20	SEP IN	I	The output signal of the SEP OUT terminal is integrated so that the vertical sync signal is input to this terminal. An integrator circuit must be connected between the SEP OUT terminal and this terminal. When this terminal is not used, it must be connected to VDD1.
21	CTRL2	I	When selecting any of the NTSC or PAL or PAL-M or PAL-N system, the pin setting has priority. When L, the NTSC system is selected after resetting. Selection of either NTSC or PAL or PAL-M or PAL-N system by the command becomes effective. H: PAL-M system.

Pin No.	Pin Name	I/O	Description
22	CTRL3	I	Controls whether or not to input the $\overline{\text{VSYNC}}$ signal to the SEPIN input. L: to input the $\overline{\text{VSYNC}}$ signal. H: not to input the $\overline{\text{VSYNC}}$ signal.
23	$\overline{\text{RST}}$	I	System reset input terminal. Pull-up resistor is built-in. (Hysteresis input).
24	VDD1	—	Power supply. (+5V digital power supply).

IC, µPD78016FGC

Pin No.	Pin Name	I/O	Description
1	RBPLS	O	RADIAL BALANCE PLUS.
2	AMUTE	O	AUDIO ANALOG MUTE (H=MUTE ON).
3	GFS	I	GFS.
4	XVCDMD	I	AUDIO/VIDEO CD MODE (L=VCD=SPINDLE GAIN UP).
5	MD2	O	DOUT MUTE CONT.
6	EMPH	I	EMPHASIS.
7	SQSO	I	SQDATA FROM CD.
8	SQCK	O	SQCLK TO CD.
9	VSS	—	GND.
10	SWNT	I	SW TV OUT MODE (L=NTSC).
11	SWAUTO	I	SW TV OUT MODE (L=NTSC/PAL AUTO).
12	SWPAL	I	SW TV OUT MODE (L=PAL).
13	EMERG	I	POWER EMERGENCY STOP (L*3sec=STOP).
14	NC	—	Nou used.
15	LPCSEL	I	“LPC ON/OFF (H=ON, NORMAL)”.
16	NC	—	Nou used.
17	LOCK	O	GFS (FRAME SYNC) LOCK (NO USE=H).
18	DMUTE	O	DIGITAL DATA OUT MUTE.
19	SENS	I	DSP SENS1 FROM CD.
20	XCDRST	O	CD RESET.
21	DATA	O	DATA TO CD.
22	XLAT	O	XLT TO CD.
23	CLOK	O	CLK TO CD.
24	VSS	—	GND.
25	FOK	I	FOCUS OK.
26	SENS2	I	SSP SENS2 FROM CD.
27	XBUSY	I/O	READY/BUSY I/O TO HOST OD.
28	NC	—	Nou used.
29	NC	—	
30	NC	—	
31	TST0	I/O	CHECK LAND.
32	TST1	I/O	
33	TST2	I/O	
34	TST3	I/O	
35	RESET	I	RESET.
36	HRDY	I	HRDY FROM CL680.
37	XHINT	I	HINT FROM CL680.
38	NC	—	Nou used.
39	SCOR	I	SCOR FROM CD.
40	VDD	—	5.0VDD.
41	XO	O	8.0MHz CERALOCK.

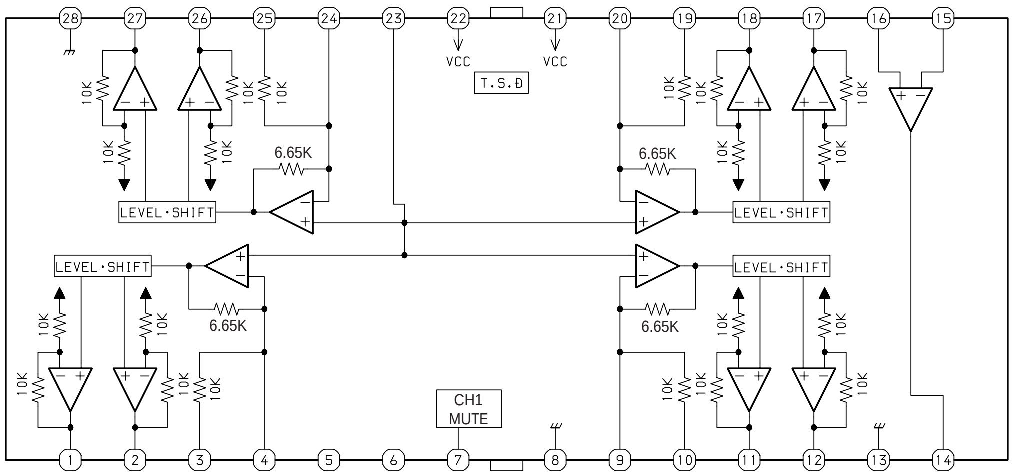
Pin No.	Pin Name	I/O	Description
42	XI	I	8.0MHz CERALOCK.
43	VSS	—	GND.
44	XT2	—	Nou used.
45	XT1	I	5.0VDD.
46	AVSS	—	GND.
47	XMPGRST	O	MPEG BLOCK IC RESET.
48	HSEL	O	ADDRESS/DATA SEL TO CL680.
49	INLSW	I	INSIDE LIMIT SW.
50	NC	—	Nou used.
51	OSDXCS	O	OSD CHIP SELECT.
52	ABSEL	I	CXA1992A/B SELECT (L=CXA1992A).
53	CLVSEL	I	CLV MODE SELECT (H=CLV-N).
54	AADSEL	I	AUTO ADJUST SELECT (H=AUTO ON).
55	AVDD	—	5.0VDD.
56	AVREF	—	
57	HDOUT	I	HD-OUT FROM CL680.
58	HDIN	O	HD-IN TO CL680.
59	HCK	O	HCK TO CL680.
60	OSDDATA	O	OSD DATA.
61	OSDCLK	O	OSD CLOCK.
62	COMMAND	I	COMMAND FROM HOST.
63	STATUS	O	STATUS TO HOST.
64	SCK	I	SCK FROM HOST.

IC, SM5878M

Pin No.	Pin Name	I/O	Description
1	MUTE	I	MODE = H: Soft mute ON/OFF terminal. (Mute at H). MODE = L: Attenuator level DOWN/UP terminal. (DOWN at H).
2	DEEM	I	De-emphasis ON/OFF terminal. (De-emphasis ON at H).
3	CKO	O	Oscillator clock output. (16.9344 MHz).
4	DVSS	—	Digital VSS terminal.
5	BCKI	I	Bit clock input terminal.
6	DI	I	Serial data input terminal.
7	DVDD	—	Digital VDD terminal.
8	LRCI	I	Sample rate clock (fs) input terminal. (H = L ch/L = R ch).
9	TSTN	I	Test input. (“H” or open during normal operation)
10	TO1	O	Test output 1. (Normally low level output).
11	AVDDL	—	Analog VDD terminal. (For L ch).
12	LO	O	Left channel analog output terminal.
13	AVSS	—	Analog VSS terminal.
14	RO	O	Right channel analog output terminal.
15	AVDDR	—	Analog VDD terminal. (For R ch).
16	MUTEO	O	Infinity zero detection output.
17	XVDD	—	X’tal system VDD terminal.
18	XTI	I	X’tal oscillator terminal. (Or external clock input terminal of 16.9344 MHz).
19	XTO	O	X’tal oscillator terminal.
20	XVSS	—	X’tal system VSS terminal.
21	DS	I	Double-speed/normal playback selection. (Double-speed at H).
22	RSTN	I	Reset terminal. (Reset at L).
23	MODE	I	Soft mute/Attenuator mode selection. (Soft mute at H).
24	ATCK	I	Attenuator level setup clock (Ignored when MODE = H).

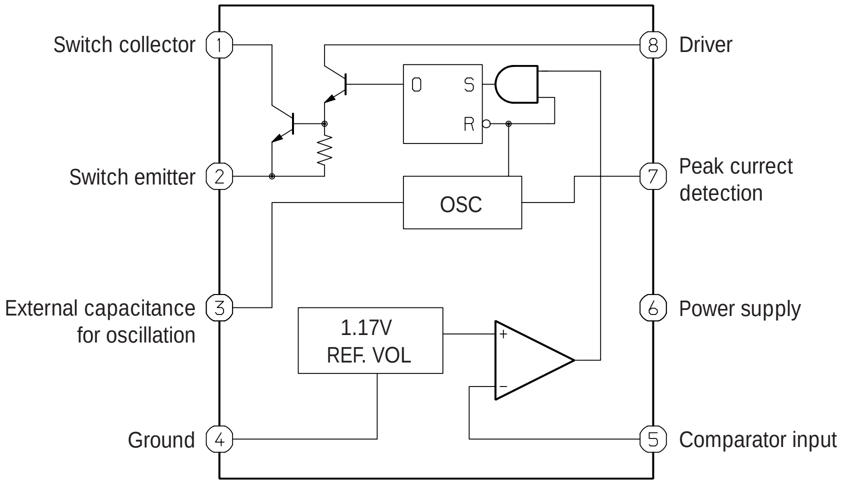
IC BLOCK DIAGRAM

IC, BA5915FP

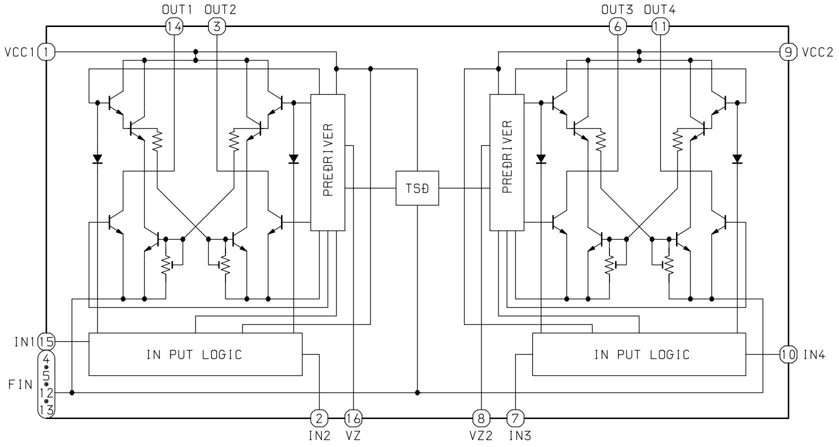

28
27
26
25
24
23
22
21
20
19
18
17
16
15
VCC
VCC
T.S.D
10K
6.65K
LEVEL·SHIFT
CH1
MUTE
1
2
3
4
5
6
7
8
9
10
11
12
13
14

T.S.D: Thermal shut-down
Resistors are in units of Ω.

IC, M5291FP


Switch collector
1
Switch emitter
2
External capacitance for oscillation
3
Ground
4
8
Driver
7
Peak currect detection
6
Power supply
5
Comparator input
Q
S
R
OSC
1.17V REF. VOL
+
−

IC, LB1644


OUT1
OUT2
14
3
OUT3
OUT4
6
11
VCC1
1
9
VCC2
PREDRIVER
TSD
PREDRIVER
IN PUT LOGIC
IN PUT LOGIC
IN1
15
FIN
4
5
12
13
10
IN4
2
IN2
16
VZ
8
VZ2
7
IN3

TRUH TABLE

IN1	IN2	OUT1	OUT2	IN3	IN4	OUT3	OUT4
0	0	L	L	0	0	L	L
1	0	H	L	1	0	H	L
0	1	L	H	0	1	L	H
1	1	L	L	1	1	L	L

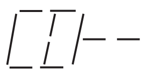
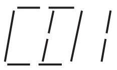
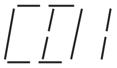
INPUT			OUTPUT				MODE	
IN1	IN2.3	IN4	OUT1	OUT2	OUT3	OUT4	M1	M2
0	0	0	L	L	L	L	BRAKE	BRAKE
1	0	0	H	L	L	L	FF/REW	BRAKE
0	1	1	L	H	L	L	REW/FF	BRAKE
1	1	0	L	L	H	L	BRAKE	FF/REW
0	0	1	L	L	L	H	BRAKE	REW/FF
1	1	1	L	L	L	L	BRAKE	BRAKE

TEST MODE

1. How to Activate CD Test Mode
   Insert the AC plug while pressing the function CD button.
   All FL display tubes will light up, and the test mode will be activated.

2. How to Cancel CD Test Mode
   Either one of the following operations will cancel the CD test mode.
   - Press the function button. (except CD function button)
   - Press the power switch button.
   - Disconnect the AC plug

3. CD Test Mode Functions
   When test mode is activated, the following mode functions from No.1 to No.5 can be used by pressing the operation keys.

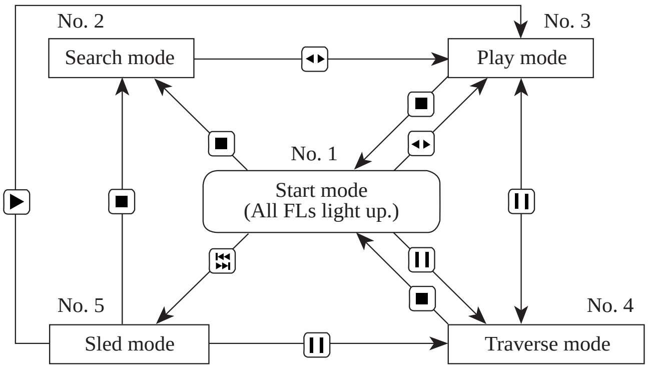
Mode/No.	Operation	FL display	Operation	Contents
Start mode No.1	Activation	TEST□□ □□ □□ Flashes repeatdly	• Test mode is activated. • CD block power is ON.	• Test mode
Search mode No.2	■ key		• Continual focus search (The pickup lens repeats the full-swing up-down motion.) * Avoid continual searches that last for more than 10 minutes. * NOTE 1	FOCUS SERVO • Check focus search waveform • Check focus error waveform (FOK/FZC are not monitored in the search mode)
Play mode No.3	◀▶key		• Normal playback • Focus search is continued if TOC cannot be read. * NOTE 1	FOCUS SERVO/TRACKING SERVO CLV SERVO/SLED SERVO Check FOK/FZC
Traverse mode No.4	❚❚ key		• During normal disc playback Press once; tracking servo OFF Press twice; tracking servo ON * NOTE 2	TRACKING SERVO ON/OFF Tracking balance (traverse) check
Sled mode No.5	⏮key ⏭	All lamps light	• Pickup moves to the outermost track • Pickup moves to the innermost track * NOTE 3 (During playback, machine operates normally.)	SLED SERVO Check SLED mechanism operation

* NOTE 1: There are cases when the tracking servo cannot be locked owing to the protection circuit being operated when heat builds up in the driver IC if the focus search is operated continually for more than 10 minutes. In these cases the power supply should be switched off for 10 minutes until heat has been reduced and then re-started.

* NOTE 2: Do not press the ⏮or⏭keys when the machine is in the ❚❚ status is active. If they are pressed, playback will not be possible after the ❚❚ status has been canceled. If the ⏮or ⏭keys are pressed in the ❚❚status, press the ■key and return to the start mode (No.1).

* NOTE 3: When pressing the ⏮or⏭keys, take care to avoid damage to the gears. Because the sled motor is activated when the ⏮or ⏭ keys are pressed, even when the pick-up is at the outermost or innermost track.

4. Operation Outline
   The operation of each mode is carried out in the direction of the arrows from the start mode as indicated in the following illustration.



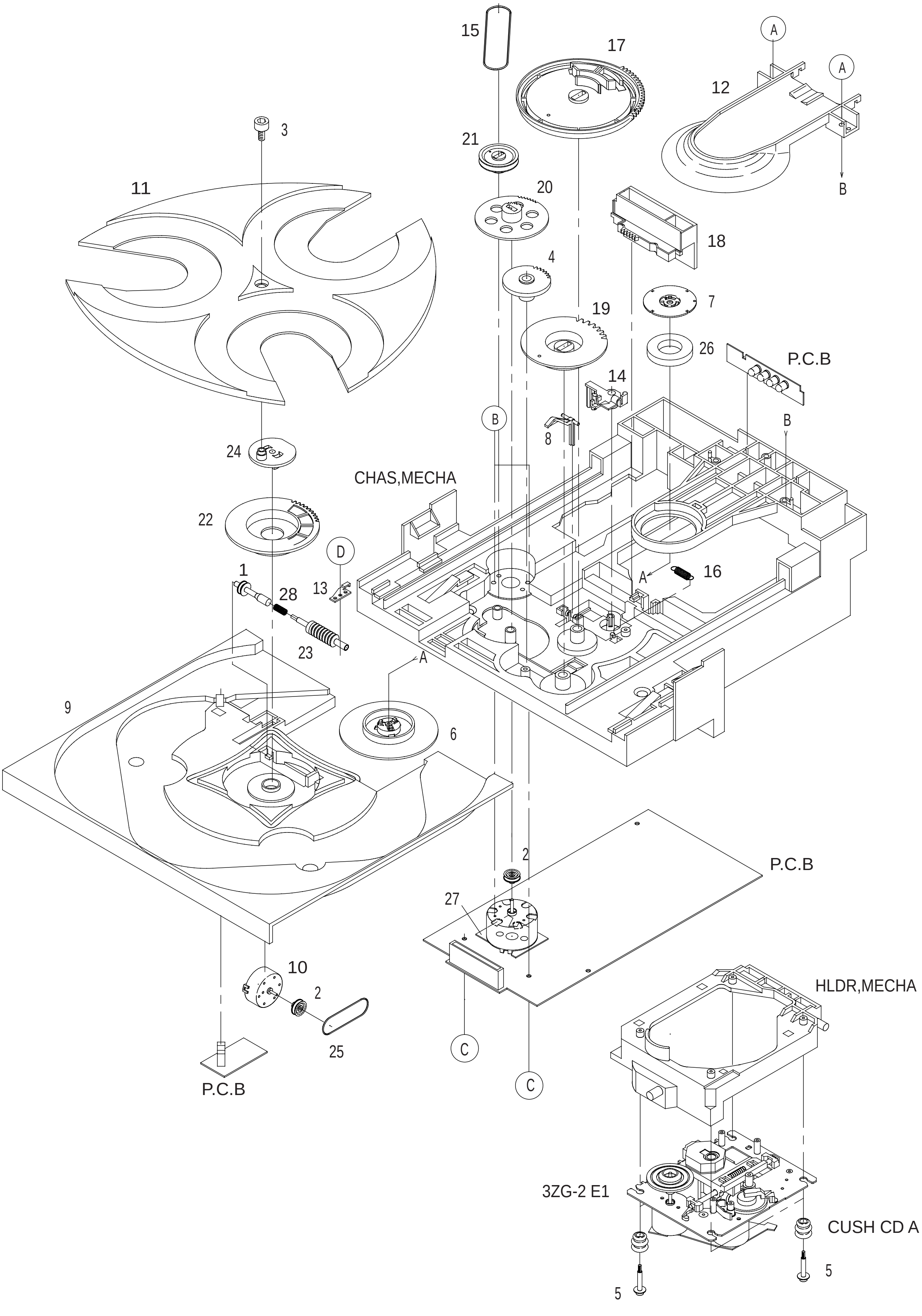
If the DISC DIRECT PLAY button is pressed, the machine performs the same operation as the PLAY button is pressed as shown. If the tray is opened by pressing OPEN/CLOSE button during Play mode or Traverse mode, the machine returns to the Start mode.

5. How to check the Automatic Adjustment Values
   The automatic adjustment values can be checked by pressing the square (■) button.
   FL display (displayed in hexadecimal values)

** ** **
→ Tracking balance (00-0F)
→ Tracking gain (00-0C)
→ Focus bias (10-2F)

Note) The reference value is “20 08 08”.

MECHANICAL EXPLODED VIEW 1/1


15
17
A
A
12
3
21
B
11
20
18
4
7
19
26
P.C.B
14
B
8
B
24
CHAS,MECHA
22
D
A
16
1
13
28
23
A
9
6
2
P.C.B
27
10
2
HLDR,MECHA
25
C
P.C.B
C
3ZG-2 E1
CUSH CD A
5
5

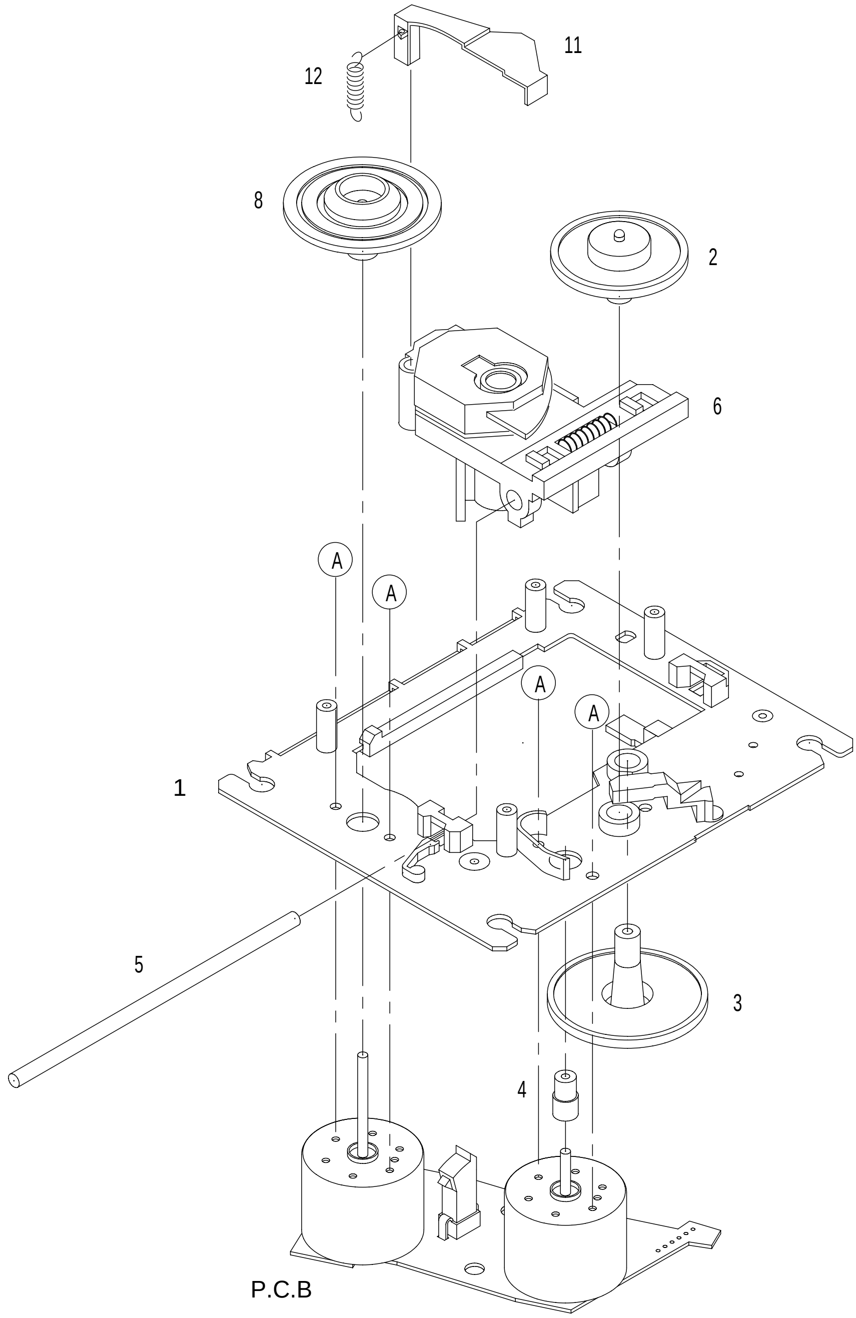
MECHANICAL PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	84-ZG1-239-210		PULLY,WORM N
2	84-ZG1-267-010		PULLEY,LOAD MO 8
3	81-ZG1-239-010		S-SCREW,TT
4	81-ZG1-291-110		GEAR,TRAY RELAY NO3
5	81-ZG1-271-010		S-SCREW MECH REAR
6	81-ZG1-277-310		HLDR,MAGNET N
7	81-ZG1-255-110		PLATE,MAGNET MK2
8	83-ZG3-213-010		LVR,SW
9	84-ZG1-003-310		TRAY,NO2-B
10	87-045-364-010		MOTOR(BCH3B14)
11	84-ZG1-005-210		TURNTABLE,NO1(*)
12	84-ZG1-011-010		REFLECTOR,CD
13	84-ZG1-259-010		SPR-P,WORM
14	84-ZG1-208-210		LEVER,CAM
15	84-ZG1-209-010		BELT,SQ1.8-117.7
16	84-ZG1-211-010		SPR-E CAM S
17	84-ZG1-215-410		GEAR,MAIN CAM BLU
18	84-ZG1-216-310		SLIDE,MECHA CAM YEL
19	84-ZG1-205-110		GEAR,TRAY
20	84-ZG1-206-110		GEAR,RELAY

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
21	84-ZG1-207-010		PULLEY,RELAY
22	84-ZG1-221-010		GEAR,MAIN TT
23	84-ZG1-238-010		GEAR,WORM N
24	84-ZG1-224-010		LEVER,TT
25	84-ZG1-225-010		BELT,SQ1.0-63.3
26	83-ZG3-602-010		RING,MAG
27	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
28	84-ZG1-248-010		SPR-C,WORM
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-251-070-410		U+2.6-3
C	87-342-036-210		UT2+2-8
D	87-067-981-010		BVT2+3-6 BLK

CD MECHANISM EXPLODED VIEW 1/1 (3ZG-2 E1)



CD MECHANISM PARTS LIST 1/1 (3ZG-2 E1)

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG2-243-110		CHAS ASSY,SHT
2	83-ZG2-235-010		GEAR,A3
3	83-ZG2-205-210		GEAR,B
4	83-ZG2-236-010		GEAR MOTOR 3
5	83-ZG2-240-010		SHAFT,SLIDE 3
6	87-A90-836-010		PICKUP,KSS-213F
8	83-ZG2-233-010		TURN TABLE,A5
11	83-ZG2-245-110		LEVER,SHUTTER
12	83-ZG2-250-010		SPR-E,SHT 2
A	87-261-032-210		SCREW V+2-3

USE MODEL LIST

- CX-NAK572
- CX-NK270
- CX-NK290
- CX-NK370
- CX-NK570
- CX-NK765
- CX-NK770
- CX-NK970
- DX-SNKH100

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
番号	連絡内容
G—　—	
G—　—	
G—　—	

912162

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